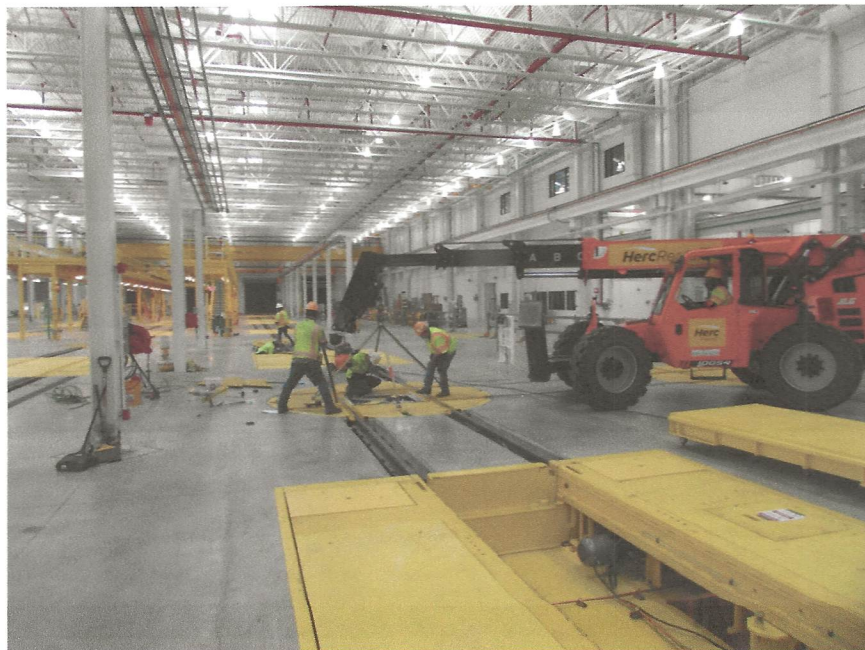


METROPOLITAN WASHINGTON AIRPORTS AUTHORITY

**DULLES CORRIDOR METRORAIL PROJECT
EXTENSION TO DULLES INTERNATIONAL
AIRPORT/ASHBURN**



Laborers Working on the Turntable Alignment in the SIB Shop

MONTHLY PROGRESS REPORT

April 2020

A handwritten signature in blue ink, which appears to read "Charles Stark, P.E.". The signature is fluid and stylized, with a long horizontal line extending from the end.

Charles Stark, P.E.

Senior Vice President, Dulles Corridor Metrorail Project

May 28, 2020

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ABBREVIATIONS AND ACRONYMS

AARB	(Virginia) Art and Architectural Review Board
AHJ	Authority Having Jurisdiction
Airports Authority	Metropolitan Washington Airports Authority
AMEP	Architectural, Mechanical, Electrical and Plumbing
ATC	Automatic Train Control
Atlantic	Atlantic Contracting and Material Company
CA	Cost Analysis
Commonwealth	Commonwealth of Virginia
CIL	Certifiable Items List
CNPA	Concurrent Non Project Activity
CPM	Critical Path Method
CPR	Certified Payrolls
CRC	Capital Rail Constructors
CRH	Contact Rail Heater
CSC	Construction Specification Conformance Checklist
CSSP	Construction Safety and Security Plan
CTB	Commonwealth Transportation Board
CTD	CIL Tracking Database
CTEM	Car Track Equipment Maintenance
DBE	Disadvantaged Business Enterprise
DCC	Design Criteria Conformance Checklist
DCR	Dulles Connector Road
DE	Dominion Energy
DEQ	(Virginia) Department of Environmental Quality
DGS	(Virginia) Department of General Services
DHS	US Department of Homeland Security
DIAAH	Dulles International Airport Access Highway
DMS	Dynamic Messaging Signs
DP	Design Package
DRC	Design Requirements Conformance Checklist
DRPT	(Virginia) Department of Rail and Public Transportation
DTR	Dulles Toll Road
DTRR	Dynamic Testing Readiness Report
EAC	Estimate at Completion
EAP	Emergency Action Plan

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EIS	Environmental Impact Statement
EOR	Engineer of Record
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
FDC	Field Design Change
FFGA	Full Funding Grant Agreement
FHWA	U. S. Federal Highway Administration
FIB	Florida I-Beam
FLSC	Fire/Life Safety Committee
FTA	U. S. Federal Transit Administration
FTE	Full Time Equivalent
GSE	Ground Service Equipment
Hensel Phelps	Hensel Phelps Construction Company
HVIRM	Hazard and Vulnerability Identification and Resolution Matrix
ICE	Independent Cost Estimate
IGA	Intergovernmental Agreement
IPP	Integrated Permit Package
JEG	Jacobs Engineering Group
JPO	Joint Program Office
LDBE	Local Disadvantaged Business Enterprise
LPA	Locally Preferred Alternative
MEP	Mechanical, Electrical and Plumbing
MOA	Memorandum of Agreement
MOT	Maintenance of Traffic
MOU	Memorandum of Understanding
MWAA	Metropolitan Washington Airports Authority
MWB	Maintenance of Way Building
NCR	Non-Conformance Report
NDC	Notice of Design Change
NOAA	National Oceanic and Atmospheric Administration
NTP	Notice to Proceed
NTSB	National Transportation Safety Board
NVTA	Northern Virginia Transportation Authority
Op	Operation Area
OSHA	Occupational Safety & Health Administration
ORD	Operational Readiness Date
PCMS	Portable Changeable Message Signs
PD	Preliminary Design
PE	Preliminary Engineering
PMOC	Project Management Oversight Contractor
PMP	Project Management Plan
PMSS	Project Management Support Services
PPTA	Public-Private Transportation Act of 1995
Project	Dulles Corridor Metrorail Project – Extension to Dulles International Airport/Ashburn
Project team	Group composed of Airports Authority staff working full- or part-time on the Project and the Airports Authority’s consultants, the PMSS group, comprised of staff from the prime consultant, Jacobs, and its sub-consultants.
PSI	Professional Service Industries, Inc.
QA	Quality Assurance

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QC	Quality Control
RAM	Reliability, Availability and Maintainability
RCMP	Risk and Contingency Management Plan
RDR	Record of Design Review
RFC	Request for Change
RFI	Request for Information
RFP	Request for Proposal
RFQ	Request for Qualifications
RFQI	Request for Qualification Information
ROD	Record of Decision
ROW	Right-of-Way
RSD	Revenue Service Date
SB	Straddle Bent
Schlosser	W.M. Schlosser Company, Incorporated
SCC	Standard Cost Category
SCWG	Safety/Security Certification Working Group
SE	Special Exception
SHPO	Virginia State Historic Preservation Office
SIB	Service and Inspection Building
SITC	Systems Integration Testing Conformance Checklist
SOE	Support of Excavation
SPD	Systems Performance Demonstration
SSCD	Scheduled Substantial Completion Date
SSWP	Site Specific Work Plan
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
SWM	Stormwater Management
SWPPP	Stormwater Pollution Prevention Plan
TB	Transportation Building
TBS	Tie-Breaker Station
TCR	Train Control Room
TIA	Time Impact Analysis
TID	Transportation Improvement District
TIFIA	USDOT Transportation Infrastructure Finance and Innovation Act
TIP	Transportation Improvement Program
TMP	Transportation Management Plan
TOC	Tri-State Oversight Committee
TPSS	Traction Power Substation
TRIP II	Toll Road Investors Partnership II
TSA	Transportation Security Administration
TWF	Train Wash Facility
USDOT	United States Department of Transportation
VDCR	Virginia Department of Conservation and Recreation
VDEQ	Virginia Department of Environmental Quality
VDOT	Virginia Department of Transportation
VMRC	Virginia Marine Resources Commission
VOIP	Voice Over Internet Protocol
VSF	Vehicle Storage Facility
VSMP	Virginia Stormwater Management Program
WHB	Warehouse Building

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WMATA	Washington Metropolitan Area Transit Authority
WMSC	Washington Metrorail Safety Commission
WTP	Wayside Test Procedures
YTP	Yard Test Procedures

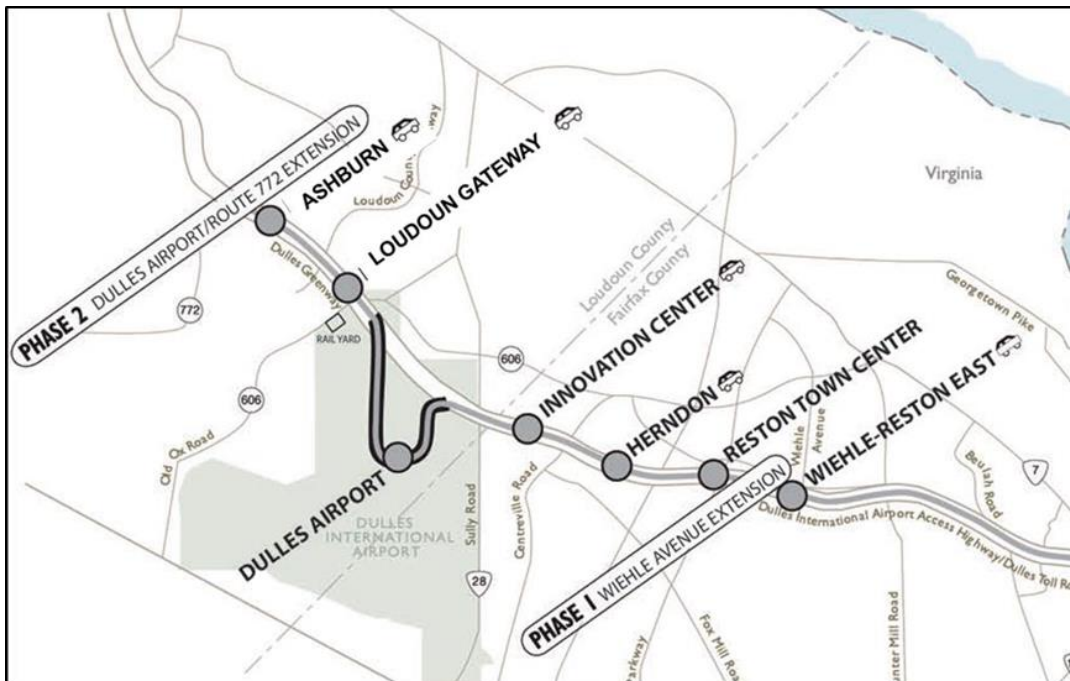
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1. PROJECT OVERVIEW

PROJECT DESCRIPTION

The Metropolitan Washington Airports Authority (Airports Authority), in cooperation with the Washington Metropolitan Area Transit Authority (WMATA), is constructing a 23.1-mile extension of WMATA's Metrorail system in the rapidly growing Dulles Corridor located in the northern part of the Commonwealth of Virginia (Commonwealth) within the greater Washington, D.C. metropolitan area. This addition — the Locally Preferred Alternative (LPA) — will extend the existing 106-mile Metrorail system from the Metrorail K-Line (Orange Line) in Fairfax County through Tysons Corner to Dulles International Airport and beyond the airport to Route 772/Ashburn Station in eastern Loudoun County. Based on U.S. Federal Transit Administration (FTA) guidance and the timing of funding availability, the Airports Authority is constructing the LPA in two major phases: Phase 1, the Extension to Wiehle Avenue and Phase 2, the Extension to Dulles Airport/Ashburn (the Project). The Project is the final 11.4 miles of the LPA, which will run from the current Wiehle Avenue Metrorail Station in Reston through Dulles International Airport to Route 772/Ashburn Station.

Figure 1 – Map of the Project



The Project includes six new Metrorail stations:

- Reston Town Center (formerly Reston Parkway),
- Herndon (formerly Herndon-Monroe),
- Innovation Center (formerly Route 28),
- Dulles Airport,
- Loudoun Gateway (formerly Route 606), and
- Ashburn (formerly Route 772).

The Project includes at-grade guideway, five at-grade stations, and rail systems in the median of the Dulles International Airport Access Highway (DIAAH) and Dulles Greenway, and an aerial (elevated) guideway, one aerial station, and a maintenance and storage yard facility at Dulles International Airport. Five new garages will be constructed to provide a total of 8,900 park-and-ride spaces for Metrorail users. Wayside facilities, including traction power substations (TPSS), tie-breaker stations (TBS), and stormwater management (SWM) facilities, will also be constructed along the alignment. The Project includes the purchase of an additional 64 railcars. The LPA has been revised to incorporate the Project Preliminary Engineering (PE) design refinements and the switch from an underground to an aerial alignment and station at Dulles International Airport. No further changes to the Project scope that would have any significant environmental impacts are anticipated. Fairfax County and Loudoun County have assumed responsibility for financing and constructing the five parking facilities by the start of revenue service. The Counties may consider design modifications or value engineering proposals that will facilitate private development of the parking garages, but given the schedule constraints, it is unlikely they will seek approval from FTA for any deviation from the PE plans that does not qualify for a Categorical Exclusion under the National Environmental Policy Act (NEPA).

The Project includes five contract packages that have been procured separately, five Metrorail parking garages, and the procurement of railcars:

➤ **Package A**

Package A includes the at-grade and aerial guideway, six stations, and all wayside facilities for the entire rail alignment between the interim terminus at Wiehle Avenue in Fairfax County and Ashburn Station, the terminal station at Route 772 in Loudoun County. As shown in Figure 2, Package A is divided into four major construction areas including the following:

- Guideway East of Dulles Airport, which includes Reston Town Center, Herndon, and Innovation Center Stations,
- Dulles Airport Station,
- Aerial Guideway in Dulles Airport, and
- Guideway West of Dulles Airport, which includes Loudoun Gateway and Ashburn Stations.

➤ **Package S**

Package S covers the site preparation for the WMATA Rail Yard and Maintenance Facility at Dulles International Airport.

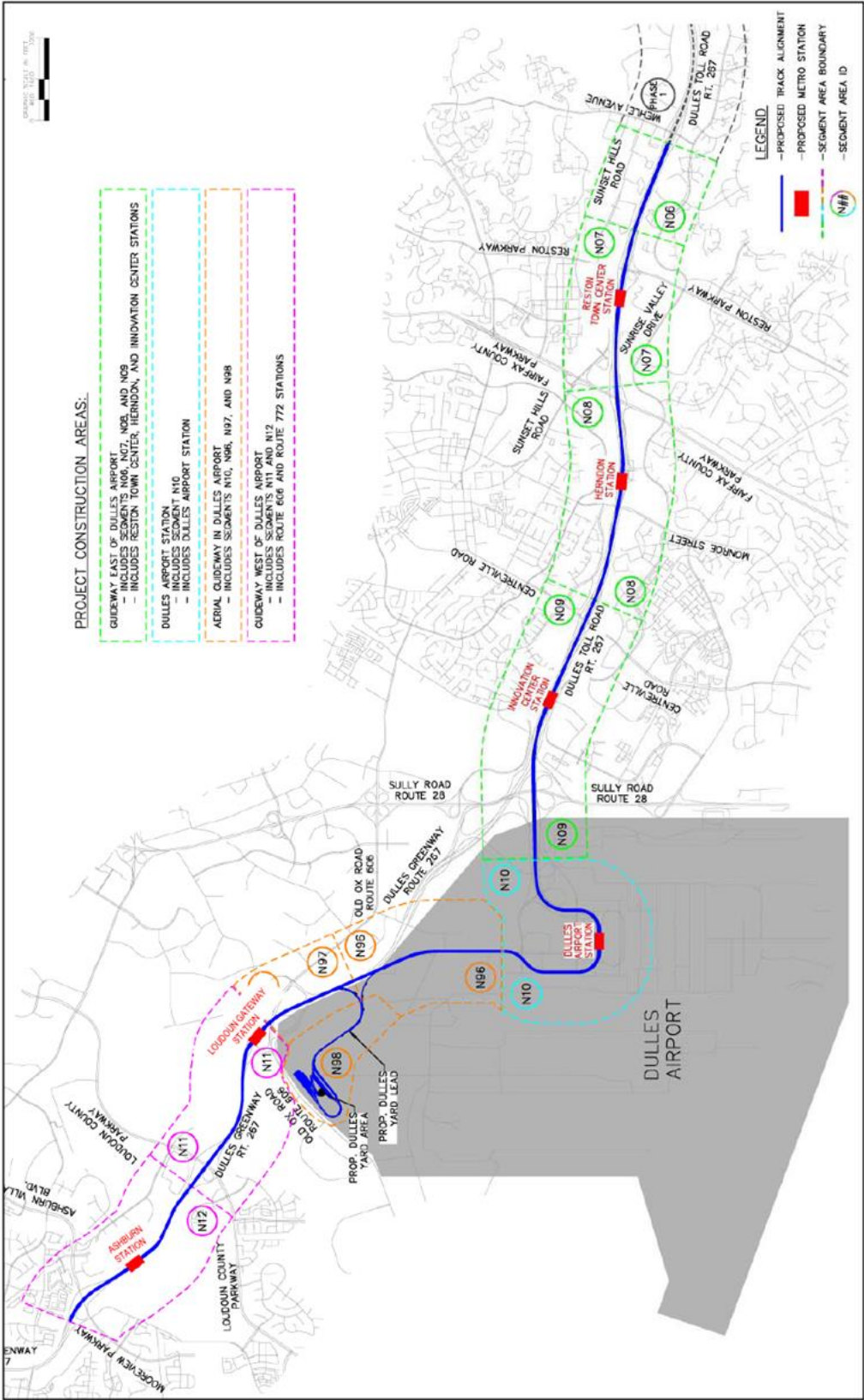
➤ **Package B**

Package B covers the final design and construction of the WMATA Rail Yard and Maintenance Facility at Dulles International Airport. The scope for Package B includes the following:

- Rail tracks and supporting infrastructure for the maintenance and storage of railcars,
- Railcar service and inspection facilities, including the yard control tower,
- Transportation facilities including railcar boarding platforms and canopies,
- Maintenance of way facility,
- Materials warehouse facility,
- Rail systems and equipment for traction power, train control, and communications,
- Roadway construction and improvements,

- Drainage and stormwater management facilities, and
 - Utility connections and relocations.
- **Package G**
- Package G is a separate contract package to furnish and install the glazed and louvered screenwalls (windcreens) at the Dulles Airport Station. These windcreens were removed from the scope of Package A and consist of structural steel framing, coping at the support sills, glazing (on the south side), architectural louvers (on the north side), and integral screenwall-mounted light fixtures.
- **Package K**
- Package K is a separate contract package to perform various design and construction services as part of the closeout of the Design/Build project to complete requirements such as the removal of the Wiehle Avenue bus lane, which must occur after revenue service begins. Other tasks may be identified for the Package K contractor during closeout activities.
- **Package P**
- Package P is a separate contract package related to stormwater management facilities for the construction of selected best management practices (BMPs) along the Project corridor. The BMPs include dry swales, filtering practices, bio-retention ponds, and constructed wetlands. The BMPs are to be designed and constructed in accordance with the Virginia Stormwater Management Program (VSMP) Regulation Part II-B Criteria and the associated permits. Construction of these BMPs was removed from the scope of Package A after the set of design-build drawings and specifications was completed, issued for construction, and approved by the Virginia Department of Environmental Quality (VDEQ).
- **Metrorail Parking Garages**
- The design and construction of the Metrorail parking garages is to be managed and funded by Fairfax and Loudoun Counties. The Airports Authority and FTA will oversee the work in order to ensure the integrity of the Project. The procurements include the following:
- Design and construction of one garage each at Herndon and Innovation Center Stations in Fairfax County.
 - Design and construction of one garage at Loudoun Gateway Station and two garages at Ashburn Station in Loudoun County.
- **Railcars**
- The 64 railcars for Phase 2 are being purchased through an option of the existing contract between WMATA and Kawasaki Rail Car, Inc. WMATA shall continue to manage this procurement and purchase, and shall be responsible for the design, and testing and commissioning of these railcars.

Figure 2 – Project Construction Area and Segments



PROJECT HISTORY

In 1990, the Virginia Commonwealth Transportation Board (CTB) adopted a Dulles Corridor transportation program with rail service as an objective and funded by excess revenues from the Dulles Toll Road (DTR). In 1995, Governor George Allen signed the Public-Private Transportation Act (PPTA) of 1995, enabling the state, qualifying local governments and other public entities to enter into agreements authorizing private groups to acquire, construct, maintain and operate transportation facilities. In April 2000, the Virginia Department of Rail and Public Transit (DRPT) signed an agreement with WMATA to prepare an environmental impact statement (EIS) for the Project. In July 2001, the Project partners signed a Memorandum of Cooperation outlining their intention to work cooperatively toward completion of PE and preparation of the EIS. The partners included: DRPT, WMATA, the Airports Authority, Fairfax and Loudoun Counties, and the Town of Herndon.

In March 2006, the Airports Authority and the Commonwealth signed a memorandum of understanding (MOU) to transfer the DTR and control of the Project to the Airports Authority.

On November 30, 2006, the FTA certified the Airports Authority as a Project Grantee. On December 29, 2006, the Airports Authority and the Commonwealth executed a Master Transfer Agreement for the DTR. DRPT transferred the Comprehensive Agreement with DTP to the Airports Authority on June 29, 2007.

On December 1, 2009, the Airports Authority awarded a contract to Dulles Rail Consultants, a joint venture of Parsons Brinckerhoff/AECOM, to perform the PE work for the Project. On February 23, 2010, the Airports Authority and WMATA signed a Cooperative Agreement for the Project's PE Technical Advisory Services. In April 2011, the Airports Authority Board approved contract packaging approach for the Project. In August 2011, the Airports Authority Board endorsed aerial alignment and station at Dulles International Airport. In November 2011, 100% PE for portions of the Project outside Dulles International Airport was completed.

On December 30, 2011, the partners (United States Department of Transportation [USDOT], the Commonwealth, Fairfax County, Loudoun County, WMATA, and the Airports Authority) entered into a Memorandum of Agreement (MOA) setting forth their mutual understandings, expectations, and commitments concerning the completion of the Project.

On February 29, 2012, 100% PE for the Dulles International Airport portion of the Project was completed. On May 11, 2012, the Environmental Assessment (EA) document on the Project PE design refinements was issued for public review. On September 27, 2012, the WMATA Board of Directors adopted the Public Hearing Report and Public Hearing Report Supplement on the PE Design Refinements and approved modifications to the General Plans for the Project. On October 17, 2012, the Airports Authority Board of Directors adopted the Revised LPA for the Project. On December 17, 2012, the FTA issued a Finding of No Significant Impact (FONSI), confirming the Project conforms to NEPA and the Historic Preservation Requirements. On January 8, 2013, The Federal Aviation Administration (FAA) issued a FONSI/Record of Decision.

On May 14, 2013, the Airports Authority awarded the contract for Package A to Capital Rail Constructors (CRC), the team consisting of Clark Construction Group and Kiewit Infrastructure South Co. A Notice to Proceed (NTP) was given on July 8, 2013.

On May 28, 2013, the clarification to the existing Cooperative Agreement between the Airports Authority and Fairfax County was signed. On July 9, 2013, the Cooperative Agreement between the Airports Authority and Town of Herndon was executed. On August 1, 2013, the Cooperative Agreement between the Airports Authority and TRIP II (Toll Road Investors Partnership II, Dulles Greenway) was executed. On August 7, 2013, the new Cooperative Agreement between the Airports Authority and WMATA was executed. On August 7, 2013, the Cooperative Agreement between the Airports Authority and Loudoun County was executed.

The Airports Authority awarded the contract for Package S to Atlantic Contracting and Material Company (Atlantic) on November 1, 2013. NTP was given on November 18, 2013.

On November 4, 2013, the amendment to the existing Cooperative Agreement between the Airports Authority and the Virginia Department of Transportation (VDOT) was executed.

On July 26, 2014, WMATA opened the Phase 1 Silver Line for revenue service to the public.

On July 29, 2014, the Airports Authority awarded the contract for Package B to Hensel Phelps Construction Company (Hensel Phelps). NTP was issued on August 18, 2014.

In August 2014, the Airports Authority and the USDOT Transportation Infrastructure Finance and Innovation Act (TIFIA) Joint Program Office (JPO) closed on a \$1.278 billion loan. In December 2014, both Fairfax and Loudoun County closed on their TIFIA loans in the amounts of \$403 million and \$195 million, respectively.

On April 27, 2015, the Airports Authority announced an update to the construction schedule for the Project. Modifications have been made and integrated into the design phase to address stormwater management changes and to enhance the safety and reliability of the Project. These modifications, when combined with associated weather and construction delays, have extended the Project construction schedule by about 13 months for a new Scheduled Substantial Completion Date (SSCD) of August 2019.

Also on April 27, 2015, the Airports Authority announced that design modifications made to enhance the safety and reliability of the Metrorail Silver Line, along with remaining work to finalize Phase 1 (Extension to Wiehle Avenue) of the overall project (Phase 1+ Phase 2), will add \$76 million, or about 2.6 percent, to the previously announced Phase 1 cost. The new Phase 1 cost remains within the original federally approved Phase 1 budget. Based on the funding agreement (Agreement to Fund the Capital Cost of Construction of Metrorail in the Dulles Corridor, dated July 19, 2007), between Fairfax County, Loudoun County, and the Airports Authority (funding partners) the Phase 1 budget increases will be jointly absorbed by the funding partners, primarily through their contributions to Phase 2.

PROGRESS HIGHLIGHTS

➤ Package A

The Project team has acquired the necessary property rights for construction for 57 parcels, including ten by condemnation, 36 by settlement agreement or dedication, three parcels by lease-rights on Airport property, one by right-of-entry on private property, and seven parcels by right-of-entry on Fairfax County and Loudoun County-controlled property. Acquisition activities are now complete for the Project.

All major design packages have been issued for construction and base scope design is complete. During *April 2020*, the Project team continued review efforts in response to design and field changes, non-conformance reports, requests for information, construction support, contractor submittals, as-built/record drawings and change order work.

In *April 2020*, construction cleanup continued at all stations as the work is completed and the code inspections are passed. Clean-up also continued along the guideway from the Reston Town Center Station to the Ashburn Station. In *April 2020*, CRC continued station finishes, and touchup at all stations.

➤ Package B

In *April 2020*, HP continued with punch out for all buildings. HP also continued work on the installation and synchronization and pre-functional testing of the car hoists and truck hoists in the Service and Inspection Building (SIB). Dynamic testing *continued* in *April 2020*. *Pre-functional testing of the train wash began.*

➤ Package G

W.M. Schlosser Company (Schlosser) *continued the full penetration welded connections in April 2020. Delivery of the lighting fixtures began in April 2020.*

➤ Package K

Package K was advertised on March 3, 2020. *Bids were received on April 2, 2020.*

➤ Package P

Four BMPs are completed except for the access roadways and final planting, which will begin in *May 2020*. Construction of 13 BMPs continued in *April 2020*. Construction of one additional BMP began in *April 2020*.

➤ Metrorail Parking Garages

The respective entities for Fairfax and Loudoun counties responsible for the garages continued with separate design and/or procurement activities for their portion of the work. The procurement and construction schedule for Metrorail Garages in Fairfax and Loudoun counties is discussed in Chapter 14: Metrorail Parking Garages.

2. PROJECT ADMINISTRATION

LITIGATION

Kerpen vs. Metropolitan Washington Airports Authority

A class action lawsuit was filed on July 5, 2016, in District of Columbia federal court by six individuals who purport to be users of the Dulles Toll Road (DTR). This is the fourth lawsuit since 2008 challenging, in one way or another, the Airport Authority's ability to set tolls on and to use toll revenues from the DTR in order to help finance construction of the Project. All prior cases have rejected the challenges that they presented. The claims in this new case are mostly legal in nature, asserting the following; (i) that, in 1986, congress delegated various federal powers to the Airports Authority and its delegation was invalid; (ii) that the Airports Authority was established and continues to exist in violation of federal constitutional "separation of powers" principles; (iii) that the interstate compact between Virginia and the District of Columbia which created the Airports Authority was and remains invalid since the District of Columbia is not a "state" and therefore not capable of entering an interstate compact; (iv) that the tolls set by the Airports Authority are "taxes" which it lacks the power to levy; (v) that the assessment of such toll-taxes violates the due process and other rights of toll road users; (vi) that the Airports Authority's operation of the Dulles Toll Road and its use of toll road revenues for the Metrorail project violate its lease with the federal government; and (vii) the U.S. Secretary of Transportation, in October 2008, wrongfully certified that the Airports Authority's operation of the DTR and the use of toll road revenues to help fund the Metrorail Project were consistent with the Airports Authority's lease. On September 26, 2016, the federal court in the District of Columbia granted the Airports Authority's motion to transfer the case to the federal District Court in Alexandria, Virginia. Since January 1, 2017, (i) the plaintiffs have moved for summary judgment on all claims, (ii) the Authority and the federal defendants have opposed that motion and have moved to dismiss the amended complaint, (iii) the District of Columbia has moved to intervene and to dismiss the plaintiffs' claim asserting the invalidity of the Authority's interstate compact, and (iv) the Commonwealth of Virginia has filed an amicus curiae brief arguing that the case should be dismissed on "indispensable party" grounds. The oral argument took place on April 25, 2017 and the appeals court rejected all of the plaintiff's issues. On June 13, 2017, Kerpen filed an appeal to the Fourth Circuit Court. In November 2017, the plaintiffs sought to exclude the federal defendants from the appeal process. That effort was rejected by the Court in February 2018. The briefing was completed in April 2018. The oral argument took place on September 27, 2018. In October 2018, the Fourth Circuit Court rejected Kerpen's claim. On October 7, 2019, the U.S. Supreme Court denied the plaintiff's petition for writ of certiorari in which they requested that the Supreme Court review the Fourth Circuit's decision affirming the district court's rejection of the plaintiffs' claims.

Schneider v. Metropolitan Washington Airports Authority

A class action lawsuit was initiated by a single plaintiff in April 2018, in the United States District Court for the Eastern District of Virginia, on behalf of a class consisting of all Dulles Toll Road users since 2008, and challenging the DTR tolls which have been established by the Authority since that year. This is the fifth lawsuit claiming, in one way or another, the unlawfulness of the Authority's DTR tolls. Here, plaintiff's sole claim is that the Airports Authority's charging of tolls that are designed to pay for the costs of the Metrorail Silver Line Project, rather than for the costs of operating and maintaining the DTR only, violates his – and the class members' – federal constitutional "right to intrastate travel." Plaintiff asserts

that, in order to be constitutional, the DTR tolls must be based upon a share of the Metrorail project costs which are “fairly attributable” to the users of the toll road, and that the share of project costs which is actually being financed by DTR tolls vastly exceeds that “fairly attributable” share. The plaintiff seeks certification of the lawsuit as a class action; the award of damages sustained by plaintiff and the members of the class as a result of paying the unlawful tolls, including all DTR revenues paid by the Airports Authority for the Silver Line construction or earmarked for that purpose; issuance of a declaratory judgment finding that the Airports Authority’s conduct violates the federal constitution; and an award of attorneys’ fees. In June 2018, the Airports Authority filed a motion to dismiss. A hearing was held in August 2018. In March 2019, the District Court dismissed the Schneider case for failure to state a claim. Although the plaintiff had the right to appeal, the deadline to appeal expired in Q2 2019.

FEDERAL COORDINATION

The following plans require FTA/Project Management Oversight Contractor (PMOC) Reviews for Document Adequacy and Document Compliance.

➤ Project Management Plan (PMP)

On July 8, 2015, FTA approved PMP, Version 2.0 and the Project Management Procedures for use on Phase 2. The revised PMP describing the new organizational structure and responsibilities was submitted to the FTA on December 4, 2015. The FTA’s comments on the PMP, Version 2.0 were received in February 2016. Version 2.1 of the PMP was submitted to the FTA on June 30, 2016, along with the revised project management procedures. The FTA’s comments on the PMP, Version 2.1 were received in September 2016. The Project team addressed the comments and submitted the DRAFT Version 2.2 of the PMP in October 2016. Additional comments were received from FTA on December 22, 2016. The Project team addressed the comments and submitted a Final Version 2.2 in January 2017. The FTA approved the PMP Version 2.2 on April 6, 2017. On March 30, 2018, the draft PMP, Version 3.0 was submitted for review. The FTA’s comments on the PMP, Version 3.0 were received in May 2018. The Project team addressed the comments and submitted the Final Version 3.1 of the PMP in February 2019. The FTA approved the PMP Version 3.1 in May 2019.

➤ Title VI Plans

Title VI, 42 U.S.C. § 2000d et seq., enacted as part of the Civil Rights Act of 1964, prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance. FTA approved the Airports Authority’s Title IV Program Plan for the Project in November 2011, having determined that it met the requirements set out in FTA’s Title VI Circular. As directed by FTA, the Airports Authority revised its Title VI Program’s Language Assistance Policy (LAP) and Limited English Proficiency (LEP) Plan and resubmitted the revisions to the FTA for review on March 16, 2016, and was deemed satisfactory via FTA’s letter dated April 25, 2016. The Airports Authority submitted the update of the Title VI program to the FTA on September 25, 2017.

➤ Quality Program Plan (QPP)

Revision 0 of the QPP was submitted to the FTA on October 24, 2012. Revision 1 was submitted to FTA on March 26, 2013, incorporating responses to FTA’s comments, and was approved by FTA on September 23, 2013.

➤ **Safety and Security Management Plan (SSMP)**

Revision 0 of the SSMP was completed on July 31, 2013, submitted to FTA on August 12, 2013, and approved by FTA on November 15, 2013. Revision 1 of the SSMP was completed on February 28, 2015, and was submitted to the FTA for review on March 17, 2015. The FTA forwarded recommendations to the Project team via e-mail on June 15, 2015. The FTA indicated that a review of the SSMP by the PMOC found the SSMP, Revision 1 to be in accordance with the requirements of 49 CFR Part 633 and Circular 5800.1. The FTA requested that the Project team obtain WMATA's sign-off on the plan. WMATA had no comments and stated that they do not intend to sign-off on the plan. This information was reported to the PMOC on August 12, 2015, followed by an email to the FTA with a copy sent to WMATA. The SSMP, Revision 1 was updated due to staffing changes, schedule adjustments and certification process refinements that have occurred since February 28, 2015. The SSMP, Revision 2 was transmitted to the FTA on February 25, 2016. PMOC comments on the SSMP, Revision 2 were transmitted to the FTA on March 29, 2016. WMATA SAFE's email sent on April 13, 2016, confirmed that they had reviewed SSMP, Revision 2 and had no comments. As stated in an email dated June 15, 2016, FTA "Accepted" the SSMP, Revision 2, with comments, to be addressed in the next revision. The SSMP, Revision 3 was transmitted to the FTA on April 12, 2017. The PMOC recommended FTA approval of the SSMP, Revision 3 on April 27, 2017. The FTA approved the SSMP, Revision 3 on August 8, 2017.

➤ **Risk and Contingency Management Plan (RCMP)**

On April 28, 2014, the Project team submitted the RCMP, Revision 1d, to the FTA. Following discussions in May 2014, the RCMP, Revision 1d, was resubmitted on June 20, 2014, for FTA's review and approval. The Project team conducted a Risk Workshop on December 12, 2014, to reevaluate the Phase 2 Risk Register. This included a collective reassessment of the ranking of approximately 100 risk items by discipline managers and resulted in the addition of new risks. The revisions were sent to FTA in February 2016 for review. In March 2015, FTA provided comments on the submitted proposed Risk Register and the Top Ten Risks List. The Project team and the FTA met several times to discuss and address these comments. The Project team incorporated FTA's comments and, on October 30, 2015, transmitted the updated Risk Register with Top Ten Risks list to FTA for formal approval. In April 2016, the Project team reevaluated the active risk events in the risk register and updated their status and rankings. Through this exercise, new risk events were added and a revised Top Ten Risks list was developed. An updated RCMP, the risk register, and the Top Ten Risks list was submitted to FTA/PMOC in May 2016. RCMP, Revision 2.0 addressed FTA's comments and was submitted on August 11, 2016. FTA approved this submittal on December 2, 2016. The risk register and top ten risk items were updated in July 2017. The Project team, in coordination with FTA and the PMOC, conducted a risk workshop on October 16, 2017, to update the Risk Register and the top ten risks list. A second workshop was conducted on October 31, 2017 for cost (Beta Factor) and schedule (Monte Carlo) analyses. The updated Risk Register and the cost and schedule contingency analysis were incorporated into the revised Risk and Contingency Management Plan (RCMP) Revision 3.0 update and a draft was sent to the FTA in November 2017. FTA's comments were received in December 2017. RCMP Revision 3.0 was approved by the FTA in March 2018. The final version of RCMP 4.0 incorporating all of FTA/PMOC comments was submitted on June 27, 2019, and resubmitted on August 15, 2019 after incorporating further comments from the

FTA. FTA approved the final version of RCMP 4.0 on September 18, 2019. The top risks are shown in Table 40.

➤ Real Estate Acquisition Management Plan (RAMP)

The FTA sent comments on Revision 0 of the RAMP on November 14, 2013. Revision 1 of the RAMP was submitted to FTA on February 5, 2014, for review and approval. FTA provided comments on the RAMP, Revision 1 on February 26, 2014, and the Project team addressed the comments in March 2014 and submitted Revision 2 of the RAMP to FTA on April 2, 2014. Comments were received from the FTA on July 3, 2014, and were addressed in Revision 3, which was submitted to the FTA on August 6, 2014. The FTA approved the RAMP, Revision 3, on August 18, 2014.

➤ Permit Management Plan

Revision 0 of the Permit Management Plan was submitted to FTA on August 16, 2013. Comments were received from FTA in December 2013 and were addressed in March 2014 by the Project team. Revision 1 of the Plan was submitted to FTA on April 2, 2014. The FTA approved the Permit Management Plan, Revision 1, on August 8, 2014.

➤ Financial Plan

The Airports Authority submitted the annual update to the Financial Plan (for the reporting period through December 2018) to TIFIA and FTA on March 27, 2019.

STAFFING

Project employees that are dedicated full-time or part-time consist of personnel from the Airports Authority, Project Management Support Services (PMSS), DRPT, VDOT, WMATA, CRC, Hensel Phelps, Schlosser, and HGS. As shown in Table 1, Planned and Actual Staffing, there were an estimated 562 Full Time Equivalents (FTEs) contributing to the effort in *April 2020*. CRC's Actual FTE was revised from 332 to 334 for the month of *March 2020*, increasing the *March 2020* Total FTE Actual from 609 to 611.

Table 1 - Planned and Actual Staffing, April 2020

ENTITY	STATUS	Full Time Equivalents				
		2020				
		Q1			Q2	
		Jan	Feb	Mar	Apr	May
Airports Authority	Planned	28	28	28	28	28
	Actual	29	29	28	28	
PMSS	Planned	102	100	100	100	100
	Actual	100	100	100	100	
VDOT	Planned	4	4	4	5	5
	Actual	4	6	5	5	
WMATA	Planned	64	64	64	50	50
	Actual	52	50	50	52	
DRPT	Planned	0	0	0	1	1
	Actual	0	0	0	1	
CRC (Package A) ¹	Planned	350	350	350	225	225
	Actual	311	325	334	274	
Hensel Phelps (Package B)	Planned	53	42	34	51	38
	Actual	54	67	54	58	
WM Schlosser (Package G) ²	Planned	9	8	14	12	11
	Actual	3	10	14	13	
HGS (Package P)	Planned	13	26	28	32	32
	Actual	17	20	26	31	
TOTAL FTE PLANNED		623	622	622	504	490
TOTAL FTE ACTUAL		570	607	611	562	0

Staffing metrics have been rounded to reflect whole FTEs.

1. CRC actuals are subject to revision each month for preceding month pending CRC receipt of all certified payroll rosters from team members.

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

On August 26, 2013, FTA approved the Airports Authority's DBE program with a 25% DBE goal for the Project. The DBE participation presented in Table 2 shows that \$239.3 million has been paid to the DBE subcontractors as of April 30, 2020.

As of April 30, 2020, 182 DBE Subcontractors have been awarded a total of 228 contracts in critical areas of construction including PE, Environmental, Systems, Civil/Structural, and Engineering Support. Table 2 reports the Airports Authority's payments to prime contractors and prime contractors' confirmed payments to DBE subcontractors. Information reported in Table 2 is delayed by one month, including the cumulative value of all payments. Confirmed payments to DBEs were reported by CRC, HP, and PSI.

Table 2 - DBE Participation Payments, *March 2020*

PRIME CONTRACTORS	CONTRACT	CONTRACT DBE GOAL	AIRPORTS AUTHORITY PAYMENTS TO PRIME CONTRACTORS		PRIME CONTRACTOR PAYMENTS TO DBE SUBCONTRACTORS	
			Period (X1000)	Cumulative (X1000)	Period (X1000)	Cumulative (X1000)
DRC	Pre -Engineering	0%		\$ 46,470		\$ 7,708
JEG	Project Management	25%		\$ 186,967		\$ 38,037
CRC	Design-Build - Package A	14%	\$ 319	\$ 1,380,448	\$ 185	\$ 149,343
Atlantic	Soil Relocation - Package S	25%		\$ 6,440		\$ 1,386
PSI	Special Inspections	15%	\$ 81	\$ 14,880	\$ 219	\$ 3,028
Hensel Phelps	Rail Yard - Package B	14%	\$ 740	\$ 278,673	\$ 191	\$ 37,726
Stantec	Right of Way	25%		\$ 3,922		\$ 975
Trauner	Change Order & Claim Status	20%		\$ 1,189		\$ 82
Schlosser	Design-Build - Package G	15%		\$ 3,068		\$ -
RES (HGS)	SWM Facilities - Package P	25%		\$ 9,854		\$ 855
Willis Of MD	Insurance Broker	0%		\$ 319		\$ 257
Phase 2 Totals			\$ 1,140	\$ 1,932,230	\$ 595	\$ 239,397

- DBE-related activities conducted by the Project team during *April 2020* included the following:
 - The Project team continued ongoing compliance monitoring and review/verification of reported DBE payments.
 - The Project team continued monthly meetings with Packages A and B prime contractors to discuss and provide guidance on DBE issues pertaining to Countable Contract Values, vetting of DBE Subcontractors, and improving projections of DBE utilization.
- Davis Bacon and Related Act (DBRA) activities during *April 2020* included the following:
 - The Project team continued compliance monitoring and review of Certified Payroll Reports.
 - The Project team continued monitoring the bilingual telephone message line and electronic e-mail accounts for complaints or concerns submitted by on-site craft employees of all active contractors.
 - The Project team continued to assist all prime contractors in developing processes to improve compliance with payroll submissions.
 - The Project team continued assisting prime contractors with the processing of conformance requests.

TITLE VI PLANS

Title VI, 42 U.S.C. § 2000d et seq., enacted as part of the Civil Rights Act of 1964, prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance. FTA approved the Airports Authority's Title VI Program Plan for the Project in November 2011, having determined that it met the requirements set out in FTA's Title VI Circular. As directed by FTA, the Airports Authority revised its Title VI Program's Language Assistance Policy (LAP) and Limited English Proficiency (LEP) Plan and resubmitted the revisions to the FTA on March 16, 2016. The revised Title VI Program was deemed satisfactory via FTA's letter dated April 25, 2016. The Airports Authority submitted an update of the Title VI program to the FTA on September 25, 2017. On August 6, 2018, the Airports Authority received a Title VI Program concurrence letter from the FTA.

3. SAFETY AND SECURITY

SAFETY AND SECURITY CERTIFICATION PROGRAM

➤ **Airports Authority Safety and Security Management Plan (SSMP)**

Revision 0 of the SSMP was completed on July 31, 2013, submitted to FTA on August 12, 2013, and approved by FTA on November 15, 2013. Planned Revision 1 of the SSMP was completed on February 28, 2015. The signed SSMP was submitted to the FTA for review on March 17, 2015. The FTA forwarded recommendations to the Project team via e-mail on June 15, 2015. The FTA indicated that a review of the SSMP by the PMOC found the SSMP, Revision 1 to be in accordance with the requirements of 49 CFR Part 633 and Circular 5800.1. The FTA requested that the Project team obtain WMATA's sign-off on the plan. WMATA has stated that they have no comments and that they do not intend to sign-off on the plan. This information was reported to the PMOC on August 12, 2015, and was followed by an email from the Project team to the FTA with a copy sent to WMATA. The SSMP, Revision 1 was updated due to staffing changes, schedule adjustments, and certification process refinements that have occurred since February 28, 2015. The SSMP, Revision 2 was transmitted to the FTA on February 25, 2016. PMOC comments on SSMP, Revision 2 were transmitted to the FTA on March 29, 2016. WMATA SAFE's email sent on April 13, 2016, confirmed that they had reviewed SSMP, Revision 2 and had no comments. As stated in an email dated June 15, 2016, FTA "Accepted" the SSMP, Revision 2, with comments, to be addressed in the next revision. The SSMP Revision 3 was transmitted to the FTA on April 12, 2017. The PMOC recommended FTA approval of the SSMP Revision 3 on April 27, 2017. The FTA approved the SSMP, Revision 3 on August 8, 2017.

The Tri-State Oversight Committee (TOC) began meeting with the Project team on a quarterly basis beginning in July 2015 to discuss coordination regarding Project Safety and Security. These meetings were discontinued following the May 17, 2017 meeting. The TOC stated at the January 17, 2017, Safety/Security Certification Working Group (SCWG) meeting that it is currently satisfied with the level of Project oversight through its participation in the SCWG and Fire/Life Safety Committee (FLSC) meetings. Future TOC coordination with the Airports Authority will be scheduled as required. On November 17, 2017, four members of the TOC participated in a tour of the Project which included the Dulles Rail Yard, Dulles Airport Station, Innovation Center Station, TBS #10, TPSS #15, the aerial guideway and ballasted track areas. The TOC sent a representative to participate in a walkdown of the track construction on the yard lead tracks on May 23, 2018. A tour of areas intended to support Dynamic Testing was conducted for the TOC on November 20, 2018, in advance of the Project entering Dynamic Testing. A tour for the TOC of the Dulles Rail was conducted on January 4, 2019.

In March 2019, safety oversight of WMATA transferred from TOC to the Washington Metrorail Safety Commission (WMSC). The WMSC is actively participating in the Project by attending FTA/PMOC meetings, SCWG meetings, and FLSC meetings. The WMSC members have received Project safety training and attend walkdowns as scheduled. The WMSC will conduct a two part Pre-Revenue Service Review (PRSR). The first part of the review dealing with the construction of the Project is expected to be completed prior to Substantial Completion. The second part of the review dealing with WMATA operational requirements will be conducted after WMATA has accepted the Project and prior to the start of revenue service. The WMSC continued finalizing the PRSR plan.

During the meeting on September 10, 2019, the WMSC provided a detailed presentation highlighting the oversight process of certification activities for the Project. The WMSC attended a walkdown of the western track guideway (Test Area 4) on September 11, 2019. The new WMSC ATC representative was provided a tour of the Project on November 18, 2019. The WMSC formally transmitted the PRSR scope document on November 20, 2019. The WMSC participated in the track cross-level remediation efforts on February 4, 2020. The WMSC Fire-Life Safety representative toured the Project on March 9, 10 and 11, 2020. *It is expected that the WMSC will issue draft findings of the Fire-Life Safety survey in May 2020.*

➤ **Safety and Security Certification Plans and Procedures**

- **Package A**

CRC's System Safety/Security Certification Plan (SSCP) was "Accepted" on October 14, 2014. CRC developed six Safety/Security Certification procedures for the Project. All six procedures were resubmitted on January 7, 2015, for review and comment. The review was completed on February 10, 2015. One procedure was "Accepted", four procedures were "Accepted as Noted", and one procedure was "Not Accepted". A comment resolution meeting was held on March 9, 2015. The six procedures were resubmitted on April 23, 2015, for review and comment. All six procedures were "Accepted" on May 27, 2015.

CRC resubmitted the SSCP, Revision 7 and procedures on September 25, 2015, for review and comment as part of its annual review of the plan. The SSCP was revised to capture minor changes that have occurred over the past year. The SSCP procedures are incorporated as appendices to the SSCP. The review was completed on October 27, 2015. The SSCP, Revision 7 was "Accepted as Noted" on November 2, 2015. The SSCP, Revision 8 with the procedures was submitted on December 9, 2015, and was "Accepted" on December 21, 2015. CRC submitted a yearly update of the SSCP and procedures for review and comment on October 4, 2016. The review of SSCP, Revision 9 was completed in November 2016, and was returned "Accepted as Noted" with minor procedural changes required. The SSCP Revision 10 was submitted for review and comment on April 3, 2018. The review of the SSCP Revision 10 was completed on May 11, 2018. The SSCP Revision 10 was "Accepted".

- **Package B**

Safety and Security Certification Plans and Procedures are being developed by Hensel Phelps. Hensel Phelps' SSCP, Revision 0 was submitted on September 30, 2014. The Project team's review was completed on November 3, 2014, and the SSCP, Revision 0 was "Accepted as Noted". The SSCP was resubmitted for review and comment on January 19, 2015. The review was completed on February 19, 2015, and the SSCP, Revision 2 was "Accepted as Noted." The SSCP, Revision 2 and three of the six required procedures were submitted on May 12, 2015, for review and comment. The review was completed and comments were returned to Hensel Phelps on July 2, 2015. The SSCP, Revision 2 and procedures were "Accepted as Noted". Hensel Phelps submitted the SSCP, Revision 2 along with four procedures on October 8, 2015. The review of the SSCP, Revision 3 and procedures was completed on November 11, 2015. The SSCP, Revision 3 was "Accepted as Noted" and will be resubmitted after the final two procedures are developed and submitted. The first of the remaining two procedures, the Construction Specification

Conformance procedure, was submitted for review and comment on December 17, 2015. The Construction Specification Conformance procedure was “Accepted as Noted” on January 21, 2016. The Systems Integration and Testing Conformance (SITC) procedure was submitted for review on February 29, 2016, and was “Accepted as Noted” on April 8, 2016. Hensel Phelps resubmitted the SSCP, Revision 4 with three updated procedures in August 2016. The review was completed and the SSCP, Revision 4 was “Accepted” on September 13, 2016. Revision 5 of the SSCP was submitted for a yearly update on September 12, 2017. The review of SSCP, Revision 5 was completed on October 20, 2017. SSCP, Revision 5 was “Accepted as Noted” with two minor comments. The SSCP, Revision 6 was submitted on March 12, 2018 for review and comment. The SSCP, Revision 6 was “Accepted” on April 19, 2018. The SITC procedure Revision 3 was submitted on September 19, 2019. The SITC procedure Revision 3 was “Accepted” on October 16, 2019. With the acceptance of the SITC procedure Revision 3, all six procedures are complete.

➤ Preliminary Hazard Analysis (PHA)

- Package A

An informal draft copy of the PHA was made available on June 25, 2014. The PHA was formally submitted for information on July 29, 2014, and is updated as necessary through the end of design. A PHA workshop was held on December 15, 2014. An updated copy of the PHA was completed and submitted for information on December 23, 2015. The submission of the final PHA update, which was initially anticipated for October 2016, was delayed due to the departure of CRC’s System Safety/Security Manager. CRC’s new System Safety/Security Manager started on November 17, 2016. The PHA was reviewed internally by the new manager. The updated PHA was submitted for information on September 29, 2017.

- Package B

A PHA was developed by Hensel Phelps, and was expected to be submitted in November 2016. The submission of the PHA was delayed due to the departure of Hensel Phelps’ System Safety/Security Manager. Hensel Phelps’ new System Safety/Security Manager started on December 7, 2016. The PHA was reviewed internally by the new manager and was submitted for information on February 14, 2017.

➤ Threat and Vulnerability Assessment (TVA)

WMATA’s TVA consists of two parts - the Silver Line (including Phase 1 and Package A of Phase 2) and the Dulles Rail Yard (Package B of Phase 2). WMATA’s TVA for the Silver Line has been drafted and retained within WMATA as a confidential document. The Project team and CRC were given the opportunity to view the TVA for the Silver Line on November 19, 2015. For the Dulles Rail Yard, the Project team and Hensel Phelps were provided an opportunity to view a TVA conducted on WMATA’s existing rail yards on August 26, 2015. WMATA will incorporate appropriate findings from the TVA in directives to the Project team and through its review of Project designs. WMATA issued a solicitation (RFP #FQ16101) on May 31, 2016, for a TVA consultant, which would conduct a review of the 100% design of Package A against the Silver Line TVA, followed by another review of Package A near the end of construction. The security consultant will review the 100% design of the Dulles Rail Yard against the existing WMATA Rail Yard TVA, followed by another security review near the end of construction of the Dulles Rail Yard. The solicitation closed on July 27, 2016.

WMATA selected a security consultant in November 2016 and conducted a kick-off meeting on December 15, 2016. The TVA design review for the Project was completed on March 1, 2017, and a report was submitted to WMATA dated March 31, 2017. At the November 2017 SCWG meeting, it was reported that there were no additional security related issues identified in the TVA report that would require action.

➤ **Certifiable Items List (CIL)**

- **Package A**

The CIL, Revision 0 was submitted to the Project team for review and comment on February 26, 2014. Comments were returned to CRC on April 16, 2014. The CIL, Revision 0 was not accepted. The CIL, Revision 1 was revised and resubmitted on May 22, 2014. The Project team reviewed the resubmitted CIL, Revision 1 and returned the CIL, Revision 1 as “Accepted as Noted” on June 25, 2014. The CIL will provide the basis for the development of the conformance checklists. The CIL, Revision 2 was resubmitted on September 18, 2014, and was “Accepted as Noted” on October 22, 2014. The CIL, Revision 3 was resubmitted on December 12, 2014. The CIL, Revision 3 was “Accepted as Noted” on January 15, 2015. The CIL, Revision 4 was submitted for review and comment on June 20, 2017. The review of the CIL, Revision 4 was completed on July 25, 2017, and returned “Accepted as Noted”. The final revision of the CIL was submitted for review and comment on September 27, 2019, following the completion of the development of the SITC checklist. The CIL, Revision 5 was “Accepted” on October 21, 2019.

- **Package B**

A CIL was developed by Hensel Phelps, with two workshops held in December 2014. The CIL, Revision 0 was submitted for review and comment on February 6, 2015. The CIL, Revision 0 review was completed and the CIL, Revision 0 was “Accepted as Noted” on March 12, 2015. The CIL, Revision 1 was submitted for review on August 10, 2016. The review was completed on September 13, 2016, with the CIL, Revision 1 “Accepted as Noted”. The CIL, Revision 2 was submitted on October 11, 2016 to resolve a numbering issue. The CIL, Revision 2 was “Accepted as Noted” on October 20, 2016. The contractor submitted the CIL, Revision 3 on February 17, 2017 to correct a minor numbering issue. The CIL, Revision 3 was “Accepted as Noted” on April 11, 2017. The final revision of the CIL was submitted for review and comment on September 9, 2019, following the completion of the development of the SITC checklist. The CIL, Revision 4 was “Accepted” on October 17, 2019.

➤ **Safety and Security Design Conformance**

Safety and security design conformance is achieved by the completion of a design conformance checklist by the contractor design team to verify that all the critical safety and security requirements of the Project have been included in the 100% design. The design conformance checklist is developed with the concurrence of WMATA.

- **Package A**

The design conformance checklist for CRC is called the Design Criteria Conformance Checklist (DCC) and is composed of eight elements based on the CIL. The completion of the DCC will be tracked as part of the CIL Tracking Database (CTD). CRC will submit DCC updates as the design progresses (approximately every 90 days) for review by the Project team and WMATA. These

updates will continue until all DCC verifications have been completed. No DCC verifications will be accepted by the Project team without concurrence by WMATA.

The DCC development for Package A began in July 2014. The DCC was developed in workshops conducted by CRC, along with the Airports Authority and WMATA system safety and security staff. The DCC development was completed and “Accepted” on November 17, 2014.

CRC submitted the first 90-day update of the DCC (DCC #1) as part of the CTD on December 18, 2014. DCC #1 contained 439 verified design items. The Project team conducted a 100% review of these items along with WMATA. The review was completed on April 30, 2015. Of the 439 verified design items in DCC #1, the Airports Authority, with WMATA’s concurrence, accepted 225. There were 2,703 items in the entire, initially approved, DCC. The second submission of the CTD occurred on June 4, 2015, and included DCC update DCC #2. DCC #2 contained 879 verified design items. The review of DCC #2 was completed in December 2015 and finalized on January 22, 2016, with the acceptance of 613 items. During the review, five items previously accepted as a part of DCC #1 were unsigned due to some minor documentation issues. CRC submitted DCC #3 on March 30, 2016. DCC #3 includes 1,335 items to be reviewed collaboratively by WMATA and the Project team. The review of DCC #3 was completed on October 28, 2016, with the acceptance of 766 items. CRC submitted DCC#4, containing 1,098 items, for review on November 30, 2016. The review of DCC#4 was completed on April 30, 2017, and 800 items were “Accepted,” bringing the total DCC completion percentage to approximately 89%. DCC#5 was submitted on July 27, 2017, containing the remaining 11% of items on the DCC. The review of DCC#5 was completed on November 30, 2017 and 264 items were “Accepted,” bringing the total DCC completion percentage to approximately 94%. Inclusion of the Lightning Protection System at the pavilions, dielectric coating of handrails at the stations, system integration items for the N06/N07 Tie-in and items for fall protection, the total of DCC items was increased to 2,843. DCC#6 was submitted on December 21, 2017, containing 240 items. The review of DCC #6 is was completed on April 30, 2018 with the acceptance of 222 items bringing the percentage of “Accepted” items to approximately 98%. Additional items were added to the overall DCC for Package B integration increased the total number of items in the DCC to 2857. DCC #7 was submitted on June 15, 2018 containing 61 items. The review was completed on September 4, 2018 with the acceptance of 48 items bringing the percentage of “Accepted” items to approximately 99%. DCC #8 containing seven items was submitted on September 14, 2018. The review was completed in October 2018 with the acceptance of all seven items. DCC #9 was submitted on November 28, 2018, containing 17 items. The review of DCC #9 was completed on December 31, 2018 with the acceptance of all 17 items bringing the percentage of “Accepted” items to 99.7%. DCC #10, containing 6 items, was submitted on January 31, 2019. The review of DCC #10 was completed on February 26, 2019 with the acceptance of five items. In February, additional DCC items for WMATA Radio were added to the DCC increasing the total number of DCC items to 2,882. Due to this increase, the total percentage of accepted items decreased to 99.1%. DCC #11, containing 25 items, was submitted on March 29, 2019. The review of DCC #11 was completed on May 13, 2019, with the acceptance of 25 items bringing the percentage of “Accepted” items to 99.7%. DCC #12 containing the last six DCC items was submitted on October 1, 2019. The review of DCC #12 was

completed on October 22, 2019, with the acceptance of six items bringing the percentage of “Accepted” items to 100%.

CRC submitted the Final Design Conformance Report *Revision 0*, containing the completed DCC checklist for review on January 9, 2020. The review was completed on February 18, 2020 and was “Accepted as Noted”. A Comment Resolution Meeting was held on February 27, 2020 to finalize the report. The DCC Final *Design Conformance* Report Revision 1 was submitted for review on March 17, 2020. The review of the report is expected to be completed in April 2020. The Design Conformance Certificate was signed by the SCWG Chairman at the SCWG meeting on March 19, 2020. *The DCC Final Design Conformance Report Revision 1 was “Accepted as Noted” on April 9, 2020. The DCC Final Design Conformance Report Revision 2 was submitted for review on April 22, 2020. The review is expected to be completed in May 2020.*

- **Package B**

The design conformance checklist for Hensel Phelps is called the Design Requirements Conformance Checklist (DRC) and is composed of 13 elements of the Project based on the CIL. Hensel Phelps will use a CIL Tracking Database, similar to that of Package A, to track DRC progress.

The DRC development for Package B began on February 5, 2015. The DRC was developed in workshops conducted by Hensel Phelps, along with the Project team and WMATA system safety and security staff. The DRC was developed to support two of the five scheduled design packages and was to be completed in two stages. The first stage of design requirement verification was to be in support of track and traction power design elements contained within design package IPP #2 Part 2 IFP, which was submitted on March 18, 2016. The DRC for IPP#2 Part 2 was completed and “Accepted” on July 21, 2016. The second stage of design requirement was to be in support of the 100 percent System-wide design, submitted in July 2016. The development of the System-wide DRC was finalized in September 2016. It was submitted for review on October 11, 2016. The System-wide DRC was “Accepted” on October 20, 2016.

Hensel Phelps submitted the verified IPP#2 DRC checklist containing 128 items on July 29, 2016. The review of the IPP#2 checklist was expected to be completed in December 2016.

Subsequently, it was decided that the original approach of using two separate checklists was inconsistent with the overall certification effort, which requires a single checklist to track safety and security critical design verifications. The IPP#2 checklist was returned to HP on December 22, 2016, with a request to combine the System-wide DRC checklist with the IPP#2 DRC checklist to create a single checklist DRC checklist for the Project. Following an internal review by HP, the combined DRC checklist was submitted on March 24, 2017. The DRC checklist was returned to HP as “Not Accepted” on April 11, 2017. The combined DRC checklist containing 411 items was resubmitted on May 8, 2017 and “Accepted” on May 11, 2017.

The initial submission of the DRC, containing 112 items was submitted for review and comment on June 7, 2017 as DRC#1. The review of DRC#1 was completed on September 20, 2017. A total of 59 items were “Accepted”. DRC#2 was submitted on November 13, 2017 containing 270 items. The review of DRC#2 was completed on February 1, 2018 accepting 188 items. DRC#3

containing 103 verified items was submitted for review on April 18, 2018. The review of DRC #3 was completed on June 27, 2018, with the acceptance of 44 items. DRC#4 containing 122 verified items was submitted for review on August 15, 2018. The review of DRC#4 was completed in October 2018 with the acceptance of 50 items. DRC #5 containing 40 verified items was submitted for review on December 18, 2018. The review of DRC #5 was completed on April 11, 2019, with the acceptance of 23 items. DRC #6 containing 17 items was submitted on February 22, 2019. The review of DRC #6 was completed on May 24, 2019 with the acceptance of 7 items bringing the percentage of “Accepted” items to 90%. DRC#7 containing 13 verified items was submitted for review on May 8, 2019. The review of DRC #7 was completed in July 2019 with the acceptance of nine items. DRC #8 containing 29 verified items was submitted for review on July 15, 2019. The review of DRC #8 was completed on September 27, 2019, with the acceptance of 22 items. DRC #9 containing nine items was submitted for review on January 9, 2020. The review of DRC #9 was completed on February 25, 2020 with the acceptance of two items. This represents a DRC completion of approximately 98%. DRC #10 is expected to be submitted in *May 2020*.

➤ **Safety and Security Construction Specification Conformance**

Safety and security construction specification conformance is achieved by the completion of a construction specification conformance checklist by the contractor construction team to verify that all the critical safety and security requirements of the Project have been properly constructed per the approved design. The construction specification conformance checklist is developed with the concurrence of WMATA.

- **Package A**

The Construction Specification Conformance Checklist (CSC) for CRC is composed of eight elements based on the CIL. The completion of the CSC will be tracked as part of the CTD. CRC will submit CSC updates as the construction progresses (approximately every 90 days) for review by the Project team and WMATA. These updates will continue until all CSC verifications have been completed. No CSC verifications will be accepted by the Project team without concurrence by WMATA.

The CSC development for Package A began in September 2015 with the development of the CSC for the Track CIL Element. The CSC is being developed in workshops conducted by CRC along with the Project team and WMATA system safety and security staff. The CSC for stations, traction power, and emergency trip stations were completed in April 2016. The CSC development for Guideways was completed in May 2016. The CSC for Communications was completed in July 2016. All of the completed checklists to date were submitted on July 7, 2016, and were “Accepted” on July 8, 2016. The checklist for Automatic Train Control (ATC) was submitted on September 19, 2016, and “Accepted” on September 22, 2016.

The initial submission of the CSC (CSC#1), containing 205 items was submitted for review in May 2017. The review was completed on September 7, 2017. A total of 176 items were “Accepted”. CSC#2, containing 186 items, was submitted on January 15, 2018. The review was completed on May 24, 2018 with the acceptance of 33 items. CSC#3 containing 203 items was submitted for review on August 29, 2018. The review of CSC#3 was completed on December 21,

2018, with the acceptance of 171 items. CSC #4 containing 69 items was submitted for review on September 28, 2018. The review of CSC #4 was completed on December 20, 2018, with the acceptance of 58 items. CSC #5, containing 34 verified items, was submitted for review on October 31, 2018. The review of CSC #5 was completed on January 10, 2019 with the acceptance of 17 items. CSC #6 containing 22 verified items was submitted for review on December 4, 2018. The review of CSC #6 was completed on January 30, 2019 with the acceptance of 7 items. CSC #7, containing 62 verified items, was submitted for review on January 2, 2019. The review of CSC #7 was completed on February 27, 2019, with the acceptance of 49 items. CSC #8 containing 111 verified items was submitted for review on January 31, 2019. The review of CSC #8 was completed in May 2019, with the acceptance of 80 items. CSC #9, containing 68 items, was submitted in March 2019. The review of CSC #9 was completed in May 2019, with the acceptance of 60 items. CSC #10, containing 32 items was submitted on March 29, 2019. The review of CSC #10 was completed in June 2019, with the acceptance of 28 items. With the acceptance of CSC #8, CSC #9 and CSC #10, the total percentage of accepted CSC items is 28%. CSC #11, containing 114 items was submitted on April 30, 2019. CSC #12, containing 32 items was submitted on May 31, 2019. CSC #13, containing 44 items was submitted on June 28, 2019. CSC #14, containing 35 items was submitted on July 31, 2019. The review of CSC #11 was completed on August 2, 2019 with the acceptance of 66 items and the review of CSC #12 was completed on August 5, 2019 with the acceptance of 25 items. The total percentage of accepted CSC items increased to 32%. CSC #15 containing 83 verified items was submitted on August 30, 2019. The review of CSC #13 was completed on September 30, 2019, with the acceptance of 29 items bringing the total percentage of accepted items to 33%. CSC #16 containing 44 items was submitted on October 1, 2019. The review of CSC #14 was completed on October 15, 2019, with the acceptance of 34 items bringing the total percentage of accepted items to 35%. CSC #17 containing 156 items was submitted on November 1, 2019. The review of CSC #15 was completed on November 22, 2019, with the acceptance of 61 items bringing the total percentage of accepted items to 38%. CSC #18 containing 191 items was submitted on December 3, 2019. The review of CSC #16 was completed on December 30, 2019, with the acceptance of 34 items bringing the percentage of accepted items to 39%. The review of CSC #18 was completed on March 18, 2020, with the acceptance of 62 items bringing the total percentage of accepted items to 41%. The review of CSC #17 was completed on January 30, 2020 with the acceptance of 89 items bringing the total percentage of accepted items to 43%. CSC #19 containing 161 items was submitted for review on December 30, 2019. The review of CSC #19 was completed on March 30, 2020, with the acceptance of 91 items bringing the total percentage of accepted items to 49%. CSC #20 containing 192 items was submitted on January 31, 2020. The review of CSC #20 is expected to be completed by April 30, 2020. CSC #21 containing 36 items was submitted on February 11, 2020. The review of CSC #21 *was completed on April 9, 2020, with the acceptance of 36 items bringing the total percentage of accepted items to 51%.* CSC #22 containing 173 items was submitted on March 2, 2020. The review of CSC #22 is expected by May 2020. CSC #23 containing 19 items was submitted on March 18, 2020. The review of CSC #23 is expected by May 2020. CSC #24 containing 52 items was submitted on March 30, 2020. The review of CSC #24 is expected by June 2020. *CSC #25 containing 27 items was submitted on April 7, 2020. The review of CSC #25 is expected by June 2020.* The total percentage of accepted CSC items is 51%.

- **Package B**

The CSC for Hensel Phelps is composed of 13 elements of the Project based on the CIL. Hensel Phelps will use a CIL Tracking Database, similar to that of Package A, to track CSC progress.

The CSC may be submitted in increments or as one submission.

The CSC development for Package B began in December 2015 with the development of the CSC checklist for Track. Since all Project specifications have been sealed, HP continues to develop the CSC. The development of the CSC began in May 2017, with workshops involving the SCWG to finalize the CSC checklists. The CSC development stage concluded in October 2017 with all requirements identified. The finalized checklist was submitted on November 6, 2017, and “Accepted” on November 9, 2017 containing 406 items. The first submission of the CSC with 12 verified items was submitted on September 17, 2018. The review was completed in October 2018, with the acceptance of seven items. CSC #2 was submitted on February 18, 2019 containing 34 items. The review of CSC #2 was completed on May 7, 2019, with the acceptance of 4 items bringing the percentage of “Accepted” items to 2%. CSC #3, containing 35 items, was submitted on March 18, 2019. CSC #4 was submitted on June 13, 2019 containing 20 items. CSC #5 was submitted on June 28, 2019 containing 21 items. The review of CSC #3 was completed on July 1, 2019 with the acceptance of 20 items. The review of CSC #5 was completed on July 30, 2019. No items were accepted following the review of CSC #5. The review of CSC #4 was completed on August 21, 2019 with the acceptance of seven items bringing the percentage of “Accepted” items to 10%. CSC #6 containing 19 items was submitted on November 4, 2019. CSC #7 containing 24 items was submitted for review on December 10, 2019. The review of CSC #6 was completed on December 31, 2019 with the acceptance of 11 items bringing the total percentage of accepted items to 13%. The review of CSC #7 was completed on January 31, 2020 with the acceptance of 11 items bringing the percentage of “Accepted” items to 16%. CSC #8 containing 31 items was submitted on March 4, 2020. The review of CSC #8 is expected in May 2020. CSC #9 containing 27 items was submitted on March 4, 2020. The review of CSC #9 is expected in June 2020. *CSC #10 containing 43 items was submitted on April 28, 2020. The review of CSC #10 is expected in July 2020. The total percentage of accepted CSC items is 16%.*

- **Safety and Security Systems Integration Testing Conformance**

Safety and security systems integration testing conformance is achieved by the completion of a Systems Integration Testing Conformance Checklist (SITC) by the contractor test team to verify that all the critical safety and security requirements of the Project have been properly tested per the approved specifications. The systems integration testing conformance checklist is developed with the concurrence of WMATA.

- **Package A**

The SITC for CRC is composed of nine elements based on the CIL. The completion of the SITC will be tracked as part of the CTD. CRC will submit SITC updates as the testing progresses (approximately every 90 days) for review by the Project team and WMATA. These updates will continue until all SITC verifications have been completed. No SITC verifications will be accepted by the Project team without concurrence by WMATA.

The SITC checklist, which is based on the Project list of systems integration tests, was developed in workshops conducted by CRC along with the Project team and WMATA system safety and

security staff. The SITC development was completed on September 12, 2019. The initial submission of the SITC checklist (SITC #1) containing 72 items was submitted on January 31, 2020. The review of SITC #1 *was completed on April 24, 2020 with the acceptance of 64 items bringing the total acceptance percentage of SITC items to 10%.* The review of SITC #2 is expected by May 2020. SITC #3 containing 9 items was submitted on March 31, 2020. The review of SITC #3 is expected by June 2020.

- **Package B**

The SITC for Hensel Phelps is composed of 13 elements based on the CIL. Hensel Phelps will use a CIL Tracking Database, similar to that of Package A, to track SITC progress. HP will submit SITC updates as the testing progresses (approximately every 90 days) for review by the Project team and WMATA. The initial submission of the SITC checklist verified items is expected to occur in Q1 2020.

The SITC checklist, which is based on the Project list of systems integration tests, was developed in workshops conducted by Hensel Phelps in coordination with the Project team and WMATA system safety and security staff. The SITC development was completed on September 9, 2019. The initial submission of the SITC checklist verified items is expected to occur in Q2 2020.

- **Safety/Security Certification Working Group (SCWG)**

- **Package A**

The Package A SCWG consists of charter representatives from the Airports Authority, WMATA, and CRC. Others that attend are members of the WMSC, PMOC, DRPT, US Department of Homeland Security (DHS)/Transportation Security Administration (TSA), and local jurisdictions. The last Package A SCWG meeting was held on March 19, 2020. The next Package A SCWG meeting is scheduled for May 21, 2020. The combined Package A and Package B Fire/Life Safety Committee (FLSC) last met on November 20, 2019. There are no further FLSC meetings scheduled for the Project unless requested by the Fire Marshals.

- **Package B**

The Package B SCWG consists of charter representatives from the Project team, WMATA, and Hensel Phelps. Others that attend are members of the WMSC, PMOC, DRPT, DHS/TSA, and local jurisdictions. The last Package B SCWG meeting was held on *April 16, 2020*. The next Package B SCWG meeting will be held on *June 18, 2020*. The combined Package A and Package B Fire/Life Safety Committee (FLSC) last met on November 20, 2019. There are no further FLSC meetings scheduled for the Project unless requested by the Fire Marshals.

CONSTRUCTION SAFETY AND SECURITY PROGRAM

- **Maintenance of Traffic (MOT) Plans**

The purpose of the MOT plans is to limit the exposure of workers, materials, and heavy equipment to traffic, while protecting the traveling public. MOT plans continue to be designed, approved, implemented and monitored daily by their respective contractors. The MOT safety management meetings will continue quarterly throughout the duration of the Project.

➤ Emergency Contacts

After hours, emergency contacts will follow the Airports Authority procedure P2M-6.03, Revision 5, which is in place during regular work hours. Depending on the severity of the incident, additional key staff may be alerted to prepare top managers for follow-up decisions.

➤ Construction Safety and Security Plans and Procedures

• Package A

CRC's Construction Safety and Security Plan (CSSP), Revision 3 was received in March 2016 and "Accepted" on May 2, 2016. The CSSP procedures were submitted on June 4, 2014, for information. CRC's CSSP, Revision 4 was "Accepted as Noted" and comments were returned to CRC. In February 2019, CRC submitted CSSP, Revision 5 for review and comment. The Emergency Action Plan (EAP), Revision 5 of the EAP was "Accepted as Noted" on August 22, 2014. The Erosion and Sediment (E&S) section of the EAP was completed in August 2015. Revision 6 of the EAP was submitted in August 2015, and was "Accepted as Noted" in September 2015. Revision 7 of the EAP was "Accepted" in October 2015.

CRC has developed and implemented a track allocation plan that addresses the hazards associated with working around rolling stock and prime movers. CRC implemented track start-up and testing procedures for energized track and hired a dedicated track manager in January 2019, to oversee these procedures.

• Package B

Hensel Phelps submitted its CSSP on September 30, 2014. The CSSP was "Accepted as Noted". The CSSP, Revision 1 was resubmitted on November 20, 2014, and was "Accepted" on December 15, 2014. Revision 2 of the CSSP was reviewed internally at Hensel Phelps but was not submitted to the Project. Hensel Phelps submitted the CSSP, Revision 3 for review on August 12, 2016. CSSP, Revision 3 was "Accepted" in September 2016.

Hensel Phelps submitted procedures to support the CSSP, Revision 1 on February 13, 2015. The procedures were "Accepted" on March 6, 2015. Hensel Phelps submitted the final EAP on May 11, 2015, to replace the "Interim" plan. Hensel Phelps resubmitted the EAP on June 28, 2015. Final EAP was "Accepted" on July 25, 2015. In August 2018, HP submitted the Rail Safety Plan, based on the criteria within Appendix Y of the CSSP. The Rail Safety Plan was reviewed in September 2018 and comments were returned to HP. HP's Appendix Y was conditionally accepted in July 2019. HP's response is awaited. In December 2019, the Airports Authority "Accepted" Appendix Y.

• Package G

In November 2019, Schlosser set up their field office and brought safety staff onboard. Construction began in December 2019.

• Package P

HGS submitted Revision 1 of its Construction Safety and Security Plan for review on October 19, 2018, which was subsequently accepted on November 14, 2018.

➤ Construction Safety Performance

• Package A

▪ Safety Walkdowns

The Project team participated in four safety walk downs in *April 2020*.

▪ Incidents

There was no OSHA recordable incident reported in *April 2020*.

▪ Audits

The Construction Safety and Security audit was conducted on February 28, 2019. CRC's response was received on March 27, 2019. This audit was closed on June 28, 2019.

▪ Safety Performance Report

Table 3 reports CRC's safety and security performance for both the month of *April 2020* and cumulatively for the entire duration of Package A.

Table 3 – Package A Safety and Security Performance Report, *April 2020*

EVENT	DURING PERIOD	CUMULATIVE
Hours Worked	10,018	8,817,245
First-Aid Cases	0	309
OSHA Recordable Cases (Non-Lost Time)	0	56
OSHA Recordable Cases (Lost Time)	0	4
Lost Time Days (for cases above)	0	11
Utility Hits	0	54
Incident Investigation Reports	2	435
Property Damage Claims (>\$1500)	0	64
Vehicular Accidents on Public Roads	0	41
DEQ Reportable Environmental Spills*	0	7

*Spills that are less than 25 gallons are not reported as long as the oil has been cleaned up, and the spill does not impact groundwater, surface water, or other waters of the US.

• Package B

▪ Safety Walkdowns

The Project team participated in four safety walkdowns in *April 2020*.

▪ Incidents

There were no OSHA recordable incidents reported in *April 2020*.

▪ Audits

The Construction Safety and Security Audit for Package B was conducted on November 14 - 15, 2017. The Project team made 26 observations and five recommendations. This audit was closed on March 28, 2018.

- Safety Performance Report
Table 4 reports Hensel Phelps' safety and security performance for both the month of *April 2020* and cumulatively for the entire duration of Package B.

Table 4 - Package B Safety and Security Performance Report, April 2020

EVENT	DURING PERIOD	CUMULATIVE
Hours Worked	7,784	2,099,435
First-Aid Cases	0	18
OSHA Recordable (Non-Lost Time)	0	14
OSHA Recordable (Lost Time Cases)	0	1
Lost Time Days (for cases above)	0	28
Property Damage Claims (>\$1500)	0	0
Incident Investigation Reports	0	88
Utility Hits	0	0
Vehicular Accidents	0	1
DEQ Reportable Environmental Spills*	0	0

*Spills that are less than 25 gallons are not reported as long as the oil has been cleaned up, and the spill does not impact groundwater, surface water, or other waters of the US.

- Package G
 - Safety Walkdowns
The Project team participated in *four walkdowns* in *April 2020*.
 - Incidents
There were no OSHA recordable incidents reported for *April 2020*.
 - Audits
No audits of Schlosser's safety program have been performed so far.
 - Safety Performance Report
Table 5 reports Schlosser's safety and security performance for both the month of *April 2020* and cumulatively for the entire duration of Package G.

Table 5 - Package G Safety and Security Performance Report, *April 2020*

EVENT	DURING PERIOD	CUMULATIVE
Hours Worked	1,646	5,803
First-Aid Cases	0	0
OSHA Recordable (Non-Lost Time)	0	0
OSHA Recordable (Lost Time Cases)	0	0
Lost Time Days (for cases above)	0	0
Property Damage Claims (>\$1500)	0	0
Incident Investigation Reports	0	0
Utility Hits	0	0
Vehicular Accidents	0	0
DEQ Reportable Environmental Spills*	0	0

*Spills that are less than 25 gallons are not reported as long as the oil has been cleaned up, and the spill does not impact groundwater, surface water, or other waters of the US.

- Package P
 - Safety Walkdowns
There were four safety walkdowns in *April 2020*.
 - Incidents
There were no OSHA recordable incidents reported in *April 2020*.
 - Audits
The Construction Safety and Security Audit was accepted on November 14, 2018.
 - Safety Performance Report
Table 6 reports HGS' safety and security performance for both the month of *April 2020* and cumulatively for the duration of Package P.

Table 6 - Package P Safety and Security Performance Report, April 2020

EVENT	DURING PERIOD	CUMULATIVE
Hours Worked	5,206	53,179
First-Aid Cases	0	0
OSHA Recordable (Non-Lost Time)	0	0
OSHA Recordable (Lost Time Cases)	0	0
Lost Time Days (for cases above)	0	0
Property Damage Claims (>\$1500)	0	0
Incident Investigation Reports	0	0
Utility Hits	0	0
Vehicular Accidents	0	0
DEQ Reportable Environmental Spills*	0	0

*Spills that are less than 25 gallons are not reported as long as the oil has been cleaned up, and the spill does not impact groundwater, surface water, or other waters of the US.

4. PROJECT QUALITY

PROJECT MANAGEMENT PROCEDURES

On May 27, 2014, the Project team received FTA's letter of approval of the Project Management Procedures. The Project Management Procedures, revised to reflect the reorganization of the Project team, were again submitted to FTA for review and approval on November 14, 2014. On July 8, 2015, FTA approved the Project Management Procedures. A number of the Procedures were again updated as part of the revision to the Final Version 2.0 Project Management Plan, submitted to FTA on December 4, 2015. FTA's comments were received in February 2016. The revised Project Management Plan Version 2.1 along with revised project management procedures was submitted to the FTA on June 30, 2016. The FTA's comments on the PMP Version 2.1 were received in September 2016. The Project team addressed the comments and submitted the DRAFT Version 2.2 of the PMP in October 2016. Additional comments were received from FTA on December 22, 2016. The Project team addressed the comments and submitted a Final Version 2.2 in January 2017. The FTA approved the PMP Version 2.2 on April 6, 2017. On March 30, 2018, the draft PMP, Version 3.0 was submitted for review. The FTA's comments on the PMP, Version 3.0 were received in May 2018. The Project team addressed the comments and submitted the DRAFT Version 3.1 of the PMP in June 2018.

QUALITY MANAGEMENT PLANS AND PROCEDURES

➤ Package A

- Revision 3 of the CRC's Design Quality Management Plan (QMP) was submitted in July 2015, and was "Accepted as Noted" in September 2015.
- The Project team completed the yearly review of CRC's QMP, Revision 2 and on December 18, 2015, determined that it was "Not Accepted". Revision 3 of the QMP was "Accepted as Noted" on August 5, 2016. Revision 4 of CRC's QMP was "Accepted" on August 31, 2016.

- The Project team performed the yearly review of CRC’s Construction QMP, Revision 3, and it was deemed “Not Accepted” on October 28, 2015. Revision 4 of the Construction QMP was “Accepted as Noted” in June 2016. Revision 5 was “Accepted” in July 2016.
- Package B
- Hensel Phelps’ Final QMP was “Accepted” on October 3, 2014.
 - The Design Management Plan was submitted on November 18, 2014. The Design Management Plan was “Accepted as Noted”.
 - The Construction Management Plan was submitted on March 13, 2015, and reviewed. The Construction Management Plan, Revision 1 was “Accepted as Noted”.
 - Hensel Phelps submitted the final updated Quality procedure package in September 2015, along with the justification for omitting the four procedures that may not be necessary. The submitted procedures were “Accepted as Noted” on November 3, 2015.

QUALITY ASSURANCE AUDITS

- Package A – The Audit and Surveillance reports for Package A are shown in Table 7.

Table 7 - Package A Audit and Surveillance Reports and Findings, April 2020

DATE	IDENTIFICATION NUMBER	ORGANIZATION / ACTIVITY	RESULTS			STATUS
			CAR	OBS	REC	
1/23/19	MWAA Survey Audit 51-19	CRC Survey	0	3	1	4/27/20 Record sheets sent back to WMATA surveyor for verification.
11/13/19	MWAA CAM Audit 55-19	CRC Care and Maintenance of Installed Equipment	0	3	1	4/30/20 Sent request to CRC for an updated schedule for CAM at all stations
2/26/20	MWAA ATC Audit 56-20	CRC Automatic Train Control	0	6	0	4/10/20 Received response from CRC. Response currently under review by MWAA Systems Team.

CAR = Corrective Action Report OBS = Observation REC = Recommendation

The schedule for future quality assurance audits and surveillance for Package A is shown in Table 8, wherein the audits are listed in order of priority, delayed pending availability of resources.

Table 8 - Package A Audit/Surveillance Schedule

TENTATIVE DATE	AUDIT (A) SURVEILLANCE (S)	ORGANIZATION/ ACTIVITY	JOINT AUDIT/ SURVEILLANCE	LEAD
Oct 2019	A	Parsons Engineering QA/QC Audit	N	MWAA/CRC
Oct-Nov 2019	A	Trackwork Engineering Quality Audit	N	MWAA/CRC
Nov-Dec 2019	A	Environmental Management Program	N	MWAA/CRC
TBD	A	Survey Audit*	N	MWAA/CRC

* The schedule for audits will be determined in coordination with CRC.

The Issues Requiring Resolution (IRRs) for Package A are shown in Table 9.

Table 9 - Issues Requiring Resolution (IRR) for Package A, March 2020

ISSUE #	ISSUE DATE	DESCRIPTION	STATUS
089-19	2/28/19	Grounding conductors need to be routed in conduit and all ground buses need to be 24 inches above finish floor	Closed 4/16/20.
092-19	9/12/19	Some cables installed in the cable tub in passenger stations have been spliced contravention of WMATA Design Criteria	Closed 4/16/20.

Corrective Action Reports (CARs) for Package A are shown in Table 10.

Table 10 - Corrective Action Reports (CARs) for Package A, April 2020

ISSUE #	ISSUE DATE	DESCRIPTION	STATUS
029-20	4/28/20	Platform paver grout is observed to be de-bonded along edges of pavers at all stations. Effervescence material deposits are appearing at platform edges.	4/28/20 CAR sent to CRC.

➤ Package B

There are no open Quality Audit or Surveillance reports for Package B at this time.

There are no Quality audits or surveillances scheduled at this time.

The IRRs related to Package B, are shown in Table 11.

Table 11 - Issues Requiring Resolution (IRR) for Package B, April 2020

ISSUE #	ISSUE DATE	DESCRIPTION	STATUS
HP-035-18	2/7/18	TPSS #21 Transformers are set on concrete pedestals 5' 2" above the finished transformer yard concrete pad.	Awaiting HP response to updated MWAA correspondence 06603-05442 dated 4/23/20.
HP-038-18	2/15/18	Master meter for Loudoun Water service is contrary to Package B Statement of Work Section 2.7.2.1.a	HP's response was received on 3/27/18 and evaluation is completed. Awaiting Loudoun Water issuance of Certificate for Water Utility System.
HP-039-18	2/14/18	Many areas of tamped track bed with concentrated fines instead of consistently graded AREMA #5 stone.	MWAA issued Directive Letter (DL) – 127 dated 3/17/20. HP action required.
HP-044-18	4/9/18	Flexible pavement has failed in various locations of rail yard.	HP's closing documentation received on 11/18/19 via 1738. Awaiting HP's submittal of paving test results.
HP-045-18	4/12/18	Approximately 80 feet of cable trough between tracks LT3 and LT4 in the rail yard have been placed too close to the track.	MWAA and WMATA have determined appropriate safety signage. HP to install.
HP-051-18	8/6/18	Exterior Precast Concrete Wall Panels of the SIB, WHB, TB and TWF are exhibiting cracking.	HP to proceed with submission of Design Change re-submittal and application of Sika Crack Treatment (8/26/19).
HP-053-18	8/20/18	Isolation Joints are not being assembled IAW manufacturer's specifications (submittal no. 0002-341193-1)	MWAA issued Directive Letter (DL) – 126 dated 3/17/20. HP action required.
HP-057-18	9/11/18	Insufficient coating thickness for Prefabricated TPSS and TCR Building Bases.	Verification by MWAA Coatings inspector completed. Response to HP via MWAA-P2B-06301 dated 1/15/20.
HP-059-18	10/2/18	SIB Elevator Machine Room does not meet the requirements of the Project Technical Specifications and WMATA Design Criteria.	HP's fourth response to MWAA via 1768 dated 2/10/20 is under evaluation.
HP-061-18	10/12/18	Multiple 60 HZ track circuits in the yard which exceed 1000 feet in length, the maximum recommended by manufacturer.	HP's updated test data response via submittals 344234.16 and 342000-0002-0 are under MWAA evaluation.
HP-071-19	3/22/19	Painting of the SIB hoist pit support beams, hoist boxes and anchor bolts is unsatisfactory to MWAA.	HP provided supplemental response to MWAA via 1913 dated 4/29/20. Under MWAA evaluation.

Table 11 - Issues Requiring Resolution (IRR) for Package B, April 2020, Cont'd.

ISSUE #	ISSUE DATE	DESCRIPTION	STATUS
HP-074-19	5/16/19	Independent Airports Authority Painting inspection	Awaiting HP response to MWAA-1911 dated 4/29/20. <i>Under MWAA evaluation.</i>
HP-079-19	7/24/19	The covers provided for transition handholes, where ductbank conduits transition to cable trough, are made of steel plate. Technical Specification requires that covers be made of dielectric materials.	MWAA response to HP_P2B_1655 via P2B-06095 dated 10/16/19 (Directive Letter – 116). Awaiting HP Proposal.
HP-080-19	9/20/19	“As-Built” configurations of the Transportation Building and Train Wash Facility pad-mount transformers do not include the oil retention pits prescribed by drawings N99-TB-E-800 and N99-TWF-E-800.	HP response to MWAA- via Submittal PB02960-DC dated 2/17/20 was not accepted. Reference MWAA-P2B-06446 dated 3/9/20.
HP-081-20	3/24/20	Four exhaust ducts penetrate 1 hour fire-rated floor slab in the SIB Communications Room.	Awaiting HP response to MWAA-P2B-06486 dated 3/26/20.

The Corrective Action Reports (CARs) for Package B are shown in Table 12.

Table 12 - Corrective Action Reports (CARs) for Package B, April 2020

ISSUE #	ISSUE DATE	DESCRIPTION	STATUS
HP-004-17	10/16/17	Low Voltage Switchgear for SIB has been procured and installed without MWAA Acceptance.	HP response is under evaluation. Need HP formal submittal of Post Installation Checkout Test Results.

SPECIAL INSPECTIONS

➤ Package A

The Airports Authority’s Special Inspection Agency, PSI, conducted code required structural inspections and tests for the following construction activities during *April 2020*:

- Innovation Center Station - PSI is working with CRC *and has closed out two* final inspection items, *with five* remaining, *along with* three deficiency items. *Galvanostatic pulse test ports were installed for future testing for corrosion potential within the Universal Concrete Products precast concrete station pieces.*
- Dulles Airport Station – PSI *closed out three* final inspection items *with three* remaining deficiency items.

- Herndon Station – *PSI inspected the installation of galvanostatic pulse test ports needed for future testing of corrosion potential within the Universal Concrete Products (UCP) precast concrete station pieces. Epoxy crack repairs in the UCP precast pieces were also inspected. PSI has 13 walkdown items and one deficiency item open.*
- Reston Town Center Station – *PSI inspected the installation of galvanostatic pulse test ports needed for future testing of corrosion potential within the UCP precast panels. PSI worked with CRC and closed out three final inspection items. Nine inspection items and one deficiency item remain open.*
- Loudoun Gateway Station – *PSI closed out three final inspection items, while nine inspection items and one deficiency item remain open.*
- Ashburn Station – *PSI has 12 final inspection items open, whereas all of the deficiency items are closed.*
- Wayside Facilities - *PSI has submitted the “Final Report of Special Inspections” for TPSS #12 to the DGS Code Official, required to close out the permit. Many inspection items and deficiency items remain open.*
- Trackwalls - *Many inspection items remain open along with three deficiency items.*
- Soundwall Retaining Wall at Innovation North – *Three deficiency items remain open.*

➤ **Package B – Dulles Rail Yard**

- *Service & Inspection Building (SIB) and Warehouse Building (WHB) Permit – PSI closed three final inspection items and one remains open. All PSI deficiency items are closed.*
- *Maintenance Of Way Building (MWB) Permit – One PSI final inspection item remains open. All PSI deficiency items are closed.*
- *Transportation Building (TB) Permit - One PSI final inspection item remains open. All PSI deficiency items are closed. All open items are required to be closed for PSI to sign off on Special Inspections permit.*
- *Train Wash Facility (TWF) Permit - Two PSI final inspection items remains open. All PSI deficiency items are closed.*
- *Vehicle Storage Facility (VSF), Gatehouse Building (GHB), and Storage Bins Permit – All final inspection and PSI deficiency items are closed. PSI is preparing the documentation to close out this permit.*
- *Traction Power Sub Station 21A & 21 and Tie Breaker Stations Foundations Permit - All final inspection and PSI deficiency items are closed. PSI is preparing the documentation to close out this permit.*

➤ **Package G – Dulles Screen Walls**

- *PSI inspected the permanent welding of column bases to base plates and purlin joint full penetration weld connections, which took place on the north and south sides of Dulles Airport Station.*

ISSUES

➤ Package A

Architectural Precast Quality

In April 2017, CRC informed the Project that during an audit of the Universal Concrete Products (UCP) fabrication facilities, errors were found in the moisture content sampling of the aggregates used. This resulted in possible errors in the calculation of the specified water cement ratio. In May 2017, CRC identified further anomalies within various concrete batches related to air entrainment, as a result of performing petrographic examinations. In June 2017, CRC scanned a sample of precast panels and discovered the reinforcement cover did not meet the minimum shown on the approved shop drawings. In July 2017, CRC engaged independent consultants to evaluate the impacts of these findings with respect to serviceability of the precast elements. On August 16, 2017, CRC submitted their consultant's (Tourney Group) revised analysis of the design life for chloride penetration for the as-built reinforcing steel concrete cover. The report stated that 0.75" concrete cover was acceptable. Dulles Rail Consultants reviewed the report and confirmed that Tourney's analysis was performed using agreed to parameters and is acceptable. CRC identified 65 panels (manufactured by Universal Concrete Products) with concrete cover of reinforcing steel of less than 0.75". Five (5) of those panels were protected from exposure to the weather and any roadway spray. It was determined that they may remain in place. Sixty (60) panels have been refabricated. In September 2017, the Tourney report was reviewed by the Project team and also by WMATA. In November 2017, CRC submitted a comprehensive report by Terence Holland, LLC addressing the water cement ratio, air content and concrete cover issues. The Holland report was reviewed by the Project team and WMATA. Holland's recommendation to apply a chemical sealant to the panels was found to have merit. On December 28, 2017 CRC submitted a proposal to apply a sealant with a corrosion inhibitor to all of the precast elements fabricated by UCP. The technical aspects of the proposal were accepted. The CRC proposed deposit payment to establish a fund for future sealant applications was "Not Accepted". In January 2018, CRC was asked to provide a revised proposal. On February 23, 2018, CRC was provided the minimum deposit amount that would be acceptable to WMATA. In March 2018, CRC proposed a 20-year sealant warranty with an extended application duration to reduce the deposit. On March 26, 2018, WMATA rejected that proposal. On April 6, 2018, CRC provided a proposal for a revised sinking fund deposit for future sealant applications. That proposal was rejected by the Airports Authority and WMATA.

On May 16, 2018 the Airports Authority was informed, through a whistleblower lawsuit in the US District Court, that the aggregate source and test data provided by Universal Concrete Products (UCP) may have been falsified. Based on the allegations made in the lawsuit, there is a concern that the aggregates used in the at-grade stations' architectural precast concrete elements may not meet requirements for non-reactivity to alkali-silica reaction (ASR). The Airports Authority conducted an independent test program, investigating the reactivity of aggregates and further acceptability of the in-situ concrete furnished by CRC/UCP. Results of the petrographic analyses do not indicate the presence of ASR, although potentially reactive minerals were identified in small quantities. The final test report was received in September 2018 and provided to WMATA, who announced they would conduct an independent investigation into the totality of concrete issues to date. As of the end of October 2018, all precast panels with inadequate reinforcement cover had been replaced, with the exception of five panels, mentioned above, that are located behind the fare vending machines. CRC addressed the cover of these panels in their Non-

Conformance Report (NCR) response which was accepted by WMATA in November 2019. In December 2018, CRC began application of the approved protective sealant to the panels at the Innovation Center Station. Application was resumed in June 2019, and completed in August 2019. The baseline chloride content test results were received in March 2019. CRC resolved the majority of comments with its May 2019 resubmittal; however some additional testing was performed at selected panels in the Reston and Herndon Stations, in July 2019. Of the 25 cores taken, 70% were found to be acceptable, 10% borderline and 20% unacceptable. As a result of these tests, the application process was revised. CRC applied a complete recoating of all panels and elements fabricated by UCP. Additional samples were taken and the test results were received in October 2019, showing that the depth of saturation and water repellency were found acceptable in all core samples taken. Evonik issued the 20-year warranty covering all five at grade stations on October 11, 2019.

Cross Level Deficiencies at Special Trackwork

CRC issued NCR-1462 in September 2018, documenting that special trackwork was failing to meet specified cross-level requirements and identifying excessive camber in the ties as the cause. The proposed disposition – to shim the rails and use non-standard rail fastening hardware – was rejected by the Airports Authority and WMATA. In December 2018, CRC was informed that – in the absence of any evidence demonstrating the ties to be compliant with AREMA - the ties must be replaced prior to substantial completion. CRC has been requested to develop a replacement plan that minimizes schedule impacts and submit a Root Cause Analysis. In January 2019, CRC submitted an alternate method for correcting cross level tolerances. In March 2019 WMATA rejected the alternative mitigation.

Surveys of all special trackwork and ties have been completed. Dulles Rail Consultants completed analysis of all locations and the information has been shared with WMATA. WMATA's independent track consultant, TTT, made a second field visit to review installed conditions in August 2019. In September 2019, field visits to the Ashburn and Loudoun Gateway special trackwork sections were held with WMATA, CRC and the Airports Authority to investigate the effects of installing standard pads on observed gaps between ties, pads and plates. These changes were shown to reduce the gaps and generally improve cross-level conditions.

Further work to assess the root cause of the cross-level noncompliance was suspended. In October 2019, the Project undertook a pilot program to rework a single special trackwork installation under closely controlled conditions to evaluate whether the non-compliant conditions can be eliminated. During November 2019, the Horsepen Run double crossover was selected, the preferred means and methods for reworking the installation were developed, and potential sources for performing this work were investigated. In December 2019, CRC engaged CraneMasters to perform the re-tamping. The tamping machine was delivered to the site and the work was completed in January 2020.

Subsequent surveys showed that the number of cross level variances (from the specified 1/8") was essentially unchanged – approximately 10% of the locations were non-compliant both before and after tamping; however the magnitude of the non-compliances was reduced from the extreme of 3/8" in one location to 1/4" or less, and gaps beneath the frogs were significantly reduced. In February 2020, WMATA accepted the remediation work done at Horsepen Run Switch.

In March 2020, CRC mobilized Crane Masters to re-tamp the switches at Herndon. Initial re- tamping, efforts improved cross-level, but following proof loading it was determined that additional rework was

required. Re-tamping efforts at Herndon *switches* were completed and submitted for review and approval in April 2020. *WMATA's assessment is awaited. CRC has moved the re-tamping effort to the N98 switches in April 2020, and will be continuing the re-tamping effort on the Broad Run, Ashburn East and Ashburn West switches.*

Surge Arresters Activation

In February 2019, CRC experienced spurious activation of several surge arresters in TPSS #15 and TPSS #17 during the overnight hours. Replacement devices were taken from the west-end TPSS locations and installed. Temporary event recorders were installed to see if the source of the surges could be detected. The events resulted in de-energization of the tracks and a minor impact to safe braking testing. CRC sent the devices back to the manufacturer for evaluation, and prepared a root cause analysis of the incidents.

In March 2019, CRC reported activation of one surge arrester in TBS #7 and one surge arrester in TPSS #17. Replacement devices were taken from non-energized TPSS locations and installed. Temporary event recorders were installed to see if the source of the surges could be detected. The events resulted in de-energization of the tracks but there was no impact to safe braking testing.

ISMC/Becker (the device manufacturer) performed benchmark testing on all arresters in TPSS #15 and TPSS #17. Ten of twelve surge arresters failed insulation resistance tests and were replaced. In August 2019, CRC completed replacement of all ISMC/Becker surge arresters with ABB Arresters that have a higher activation threshold. CRC issued a preliminary forensic analysis report on the failed arresters and continued the investigation regarding the cause of the activations. The Root Cause Analysis Report was received in June 2019, and was resubmitted in July 2019. Comments on the revised report were returned to CRC in September 2019. In August 2019, CRC provided data collected and used in the development of conclusions for the root cause analysis, and met with the Project team to discuss the report. In September 2019, it was determined that several negative side surge arresters had also activated, requiring their replacement. In October 2019, CRC began replacement of all negative surge arresters. The negative surge arrester replacements were completed in January 2020. The Project continued independent investigation of the issue, and has developed a monitoring plan that will be implemented in the Package B traction power substation (as the equipment is identical) once dynamic testing starts in the Yard. In February 2020, two surge arrestors activated in the Yard without vehicles on the tracks. The Project is working with the contractor and evaluating data to develop a root cause analysis.

Bent Plates/Gaps beneath frogs at Special Trackwork

As discussed above, CRC issued NCR-1462 in September 2018, documenting that special trackwork was failing to meet specified cross-level requirements and identifying excessive camber in the ties as the cause. During their second field visit to review installed conditions in August 2019, TTT observed gaps below the track plates and commented that fatigue could be a concern.

In November 2019, CRC responded to WMATA's concerns regarding track plate fatigue due to deflections observed by TTT. WMATA provided comments to the analysis. CRC revised and resubmitted the analysis in response to Airports Authority and WMATA comments in December 2019, concluding that all plate stresses were within allowable limits. In January 2020, WMATA completed its review without comment. Following re-tamping gaps were confirmed to be significantly reduced or eliminated; however

WMATA did measure a single location with a gap slightly greater than one-fourth of an inch. This gap was analyzed and shown not to present fatigue concerns. All plates will be checked for gaps following re-tamping.

➤ **Package B**

Concentrated Fines in Ballast

In February 2018, the Project team identified an issue with concentrated fines in the ballast of the track bed. In December 2018, a comprehensive ballast testing program was carried out to determine the locations for remedial work to remove the remaining fines in the ballast. In January 2019, it was decided that the ballast at certain locations of the layup yard, where the ballast Fouling Index were determined to be moderately fouled and fouled requires replacement with a ballast with Fouling Index of 6 or better. In February 2019, HP began to remove and replace the ballast on areas that they acknowledged and the Airports Authority previously identified as moderately fouled and fouled. In March 2019, the fouled ballast was replaced by the subcontractor. In September 2019, the Airports Authority and WMATA identified additional areas with concentrated fines in the ballast. Testing of those areas continued in November 2019. In December 2019, testing at all 90 locations was completed. In January 2020, PSI's laboratory test report and results were provided to the Airports Authority and WMATA. In February 2020, WMATA provided their requirements in mitigating the ballast condition. WMATA requires that ballast cleaning and or replacement shall be performed at all locations that were identified in the PSI report to have a Fouling Index (FI) greater than 6. In March 2020, a Directive Letter was issued to HP to mitigate the installed ballast to conform to the specification. Specifically, the requirement of the ballast is to have less than 1% passing through Sieve 200. *HP's response is awaited.*

Cracks in the Precast Wall Panels

In July 2018, the Project team identified numerous cracks in the precast panels for the exterior walls of the SIB, Warehouse Building (WHB) and Transportation Building (TB). Monitoring gauges were set to measure movement of the cracks. HP has been asked to perform a root cause analysis of the cracking. In September 2018, the design team continued monitoring the cracks of the precast wall. WSP began investigating the cracks that developed on the precast concrete wall panels. Mapping of the cracks was completed and technical documents, including piece tickets and concrete test result reports, were reviewed. In October 2018, the scan concluded that the observed cracking in the panels does not appear to be related to missing or misplaced steel bars and to the changes in panel thickness. WSP is preparing a full evaluation report to include the cause of the cracking and any proposed measure to address and/or treat the cracking in the panels.

In November 2018, WSP submitted their evaluation report of the precast concrete wall panel cracks. Based on WSP's assessment it appears that most of the cracks that developed on the insulated precast are a result of the panel connections to the foundation restraining the thermal and concrete shrinkage movement of the panels. While the cracks are very narrow, there is some potential for reduced panel durability as moisture penetrates through the cracks to the reinforcing and increases the potential for corrosion. Without removing and replacing the affected panels, one option presented by WSP to remediate the panel condition is the application of a clear, breathable, penetrating sealer to all of the panel surfaces. WSP recommended that the pre-caster, Shockey Group reevaluate the precast concrete panel connection system, remediate the

connections, and mitigate the restraint, which should limit additional cracks and prevent the lengthening of existing cracks. In December 2018, the Precast Concrete Wall Panel Crack Reports from Shockey and WSP were provided to WMATA. The WSP report was provided to HP and the Airports Authority requested HP to reevaluate the connections of the precast to the foundation wall as recommended by WSP. In January 2019, HP completed the review of the WSP Precast Concrete Wall Panel Crack Report and has responded to the Airports Authority request to re-evaluate the connections of the precast to the foundation wall as recommended by WSP. In their response, HP has recommended the application of protective coating as advised by the precast manufacturer's engineer. In February 2019, HP's recommended mitigation was provided to WMATA for review. Participation of the manufacturer of Sika 670w, the product recommended by HP to be applied over the areas of the cracks, was requested to provide clarification on the efficacy and re-application requirements. In March 2019, the Project team met with HP and WMATA. After clarification from the Sika product representative, it was determined that Sika 550 is the appropriate product for the application. HP prepared a mock-up of the precast with the Sika 550 applied. In May 2019, the sealer color was finalized. In June 2019, the Sika 550W product data was accepted. In July 2019, the mockup was reviewed and accepted by WMATA. The design change for the modification of the technical specification to include the Sika 550W as a material to be used to mitigate the cracks and the re-application requirements is under review. In September 2019, the Airports Authority formally notified HP that funding for future re-application needs to be established through an escrow account. HP has objected to its responsibility for the cost of the re-application. In October 2019, HP proceeded with the application of the Sika 550W elastomeric sealer. In November 2019, HP submitted an investigation report on the cracking of precast concrete wall panels with respect to service life/durability. The report concluded that the panels have a service life of over 150 years, without the application of a penetrating silane sealer and/or the Sika 550W elastomeric coating. The report also states that the fine cracks on the precast walls pose no influence on long-term durability. Further, the inclusion of the SikaMix 10 W in the mix design is a durability performance enhancement. In January 2020, WSP provided their initial review of the investigation report on the cracks of precast concrete wall prepared by Tourney Consulting Group. WSP takes no issue with the approach and assessment of the Tourney Report. A follow up written report was provided by WSP in February 2020. The Project team compiled the Haley & Aldrich crack monitoring report, Shockey's crack evaluation report, and all other reports related to the assessment of the panels with cracks, and this was sent to WMATA for their review. *In April 2020, WMATA's review comments were received. WMATA requested the following to be performed:*

- *Engage a third-party consultant to perform a comprehensive survey and mapping of the cracking (width, length, location) at the precast panels for all of the buildings in the Yard, and to determine the range of crack depth.*
- *Arrange for additional concrete cover testing, as augmentation of the CTL Group October 31, 2018 report, to verify depth of cover at horizontal reinforcement at the bottom of panels and at vertical reinforcement of 1/2" diameter 270 ksi strands, which are not addressed in the CTL group report.*
- *Obtain responses from HP to the comments and concerns raised by DRC and WMATA regarding the TCG report, and conduct a comment resolution meeting.*

- *Pursue revision of the TCG and DRC analyses to reflect resolution of comments and concerns raised by DRC (applicable to TCG report) and WMATA, and to reflect crack characteristics from the third-party survey and mapping effort described above.*

The Airports Authority has verified WMATA's new crack mapping and determined that the cracks mapped by WMATA as new were already included in the WSP Report and are not new. The vertical cracks at the end of the panel identified by WMATA are not temperature cracks by cold joints between panel sections.

Trackwork Rail Ties

In October 2018, the special trackwork rail ties (especially those at the switches) were checked for potential excessive camber issue similar to the ties in Package A. Four switches were checked and found to be acceptable. The vendor supplying the ties is the same for Package B as for Package A. Survey work began in January 2019 to determine whether any intermediate ties had excessive camber, since remaining special trackwork was not complete enough to run cross levels. In February 2019, the Airports Authority started to evaluate the survey data and requested additional survey for switch locations. After further review, the camber does not exceed the allowable specification requirement. The issue has been resolved. This will be re-verified once the track rework is complete and ready for inspection.

Restraining Rails and Running Rails

In January 2019, it was determined that the installed restraining rails and running rails along the loop track need to be replaced due to oversized bolt holes for the 132 RE restraining rail standard joints and running rail as well as the deviation of the hole locations from the accepted design drawings. In February 2019, HP acknowledged that the affected rails need to be removed and replaced and has started to order the replacement restraining and running rails. This work was completed in January 2020, and will be verified following the completion of dynamic testing.

Insulated Joints

Testing of the insulated joints (IJs) did not meet WMATA design criteria or the manufacturer's criteria. An investigation was conducted to find the reason for the failures. During the investigation, several deficiencies were noted in the mechanical field installations of the IJs. As of December 2019, HP has replaced the following:

- Replaced 27 IJs in 2018 due to incorrect drilling of rails.
- Replaced 32 IJs in 201. Random inspections found various installation deficiencies.
- Replaced eight IJs for incorrect 3/16" end-post installed.
- Replaced two IJs for excessive gap at joint.
- Replaced one IJ for stock rail replacement.
- Replaced two IJs per EOR. This was a result of high voltage testing.
- Replaced 6 factory-installed IJs per EOR. No mechanical or installation issues were observed with Factory IJs. They were replaced as a result of inadequate high voltage testing results.

Table 13 – Package B Insulated Joints Status, March 2020

Insulated Joints	Quantities
Factory installed	122
Replaced	6
Remaining	116
Field installed	168
Replaced	66
Remaining	97
TOTAL	290

In February 2020, HP was advised to provide a detailed record of field connections of each insulated joint. In addition, HP was asked to address the approximately 56 insulated joints that do not pass the Specification Section 34 20 00, part 3.03.8.3, Rail to Joint Bar Insulation requirement of 1 megaohm. In March 2020, a Directive Letter was issued to HP to test the IJs to verify that they meet the specification requirements. *HP's response is awaited.*

Tight Gauge in Switches

During periodic inspections of the #8 switches in the Yard, it was observed that the track gauge in the area of the number four rod tended to be 'tight' or too narrow, causing the inner face of the rail to bear on the wheel flanges, causing wear. Inspection on January 23, 2020 found five switches still 'tight'. In March 2020, HP continued adjustment work on the switches to correct the conditions.

5. PROJECT FINANCE

CAPITAL FUNDING SOURCES

On April 27, 2015, the Airports Authority announced an update to the construction schedule for Phase 2. 178 modifications have been made and integrated into the design phase to enhance the safety and reliability of the Project including changes to the stormwater management criteria. These modifications, when combined with associated weather and construction delays, have extended the Phase 2 construction schedule by about 13 months for a new SSCD of August 2019.

On April 27, 2015, the Airports Authority also announced that a Global Settlement with the construction contractor for Phase 1, along with the resolution of other outstanding matters, has allowed the Airports Authority to project a final Phase 1 close-out cost of \$2.982 billion, which represents an increase of \$76 million (approximately 2.6% of the Phase 1 Budget).

Based on the funding agreement between the funding partners (Agreement to Fund the Capital Cost of Construction of Metrorail in the Dulles Corridor) dated July 29, 2007, this increase will be allocated to each funding partner's contribution towards the total Project Cost: 16.1% by Fairfax County, 4.8% by Loudoun County, and 4.1% by Airports Authority. Any remaining costs (75%) will be borne by the DTR.

The additional funds will be received from the funding partners during Phase 2 of the project. The ultimate financial impact of the Phase 1 budget adjustment may be reduced or eliminated if the contingency in the Phase 2 budget is not fully used and the total Project Cost is under budget.

In October 2015, Fairfax County was awarded a grant from the NVTa. Fairfax County accepted the funds and entered into agreements with NVTa and the Airports Authority to use \$33 million of the funding to offset construction costs related to the Innovation Center Station. Funds were allocated to each funding partner (Fairfax County, Loudoun County and the Airports Authority) based on the contribution rates specified in the funding agreement (Agreement to Fund the Capital Cost of Construction of Metrorail in the Dulles Corridor, dated July 19, 2007). These contribution rates are 16.1% for Fairfax County, 4.8% for Loudoun County, and 4.1% for the Airports Authority. This reduced each funding partners' required contribution toward the total Project Costs by the following amounts: \$5.3 million for Fairfax County, \$1.6 million for Loudoun County, \$1.3 million for the Airports Authority. DTR's contributions to the total Project costs were reduced by \$24.7 million. In May 2016, Fairfax County was awarded an additional \$27 million grant from the NVTa to offset the construction costs for the Innovation Center Station. The funds will reduce each of the funding partner's required contribution to the Project in the same manner as the initial grant.

In May 2018, the Project received a grant worth \$11,069,355 from Congestion Mitigation Air Quality (CMAQ) for the Innovation Center Station. Although the CMAQ grant reduces each of the funding partners required contribution to the Project, the changes in percentages are very small. The dollar amount reductions are \$1.7 million for Fairfax County, \$0.5 million for Loudoun County, \$0.4 million for MWAA aviation, and \$8.3 million for MWAA Dulles Toll Road. Adjustment to each funding partner's contribution can be seen in Table 14 and Table 15.

Table 14 - Expected Funding Sources for Total Project (Phases 1 and 2)

SOURCES OF CAPITAL FUNDS \$ Millions	RAIL PROJECT BUDGET prior to NVTA and CMAQ funding		Change	RAIL PROJECT BUDGET after NVTA and CMAQ funding	
	Total	% of Total		Total	% of Total
Phase 1 Capital Budget	\$ 2,982			\$ 2,982	
Phase 2 Capital Budget ⁽¹⁾	2,778			2,778	
Total Rail Project Budget ⁽²⁾	\$ 5,760			\$ 5,760	
Federal	\$ 900	15.6%		\$ 900	15.6%
Commonwealth of Virginia ^{(3) (4)}	575	10.0%		575	10.0%
Northern Virginia Transportation Authority	-	0.0%	60	60	1.0%
CMAQ	-	0.0%	11	11	0.2%
Fairfax County	927	16.1%	(11.4)	916	15.9%
Loudoun County	277	4.8%	(3.4)	274	4.7%
MWAA (Aviation Funds)	236	4.1%	(2.9)	233	4.0%
MWAA (Dulles Toll Road)	\$ 2,845	49.4%	(53.3)	\$ 2,792	48.5%
	\$ 5,760	100.0%	\$ -	\$ 5,760	100.0%
TOTAL SOURCES OF FUNDS					
Fixed Amount					
Fixed Percentage of total cost					
Residual					
Percentage After Allocation of NVTA and CMAQ Funds					

(1) Capital budget for Phase 2 includes approximately \$551 million of initially unallocated contingency.
(2) Phase 2 Parking Garages are to be funded directly by the Counties and are not included in the Total Rail Project Budget.
(3) Does not include \$150 million of Commonwealth funds that will be used to pay interest on DTR revenue bonds.
(4) Includes \$75,000,000 from Section 5307 Surface Transportation Program funds.

Table 15 - Expected Phase 2 Funding Sources

EXPECTED FUNDING SOURCES FOR PHASE 2	AMOUNT (Prior to NVTA & CMAQ)	AMOUNT (After NVTA & CMAQ)	CHANGE
	(x1000 in YOE Dollars)	(x1000 in YOE Dollars)	(x1000 in YOE Dollars)
Federal Transit Administration ¹	\$ -	\$ -	\$ -
Commonwealth of Virginia ²	\$ 323,300	\$ 323,300	\$ -
Northern Virginia Transportation Authority	\$ -	\$ 60,000	\$ 60,000
Congestion Mitigation Air Quality Grant ³	\$ -	\$ 11,069	\$ 11,069
Fairfax County	\$ 527,352	\$ 515,910	\$ (11,442)
Loudoun County	\$ 276,478	\$ 273,066	\$ (3,412)
Airports Authority (Aviation Funds)	\$ 236,158	\$ 233,244	\$ (2,914)
Airports Authority (Dulles Toll Road) ⁴	\$ 1,414,948	\$ 1,361,647	\$ (53,301)
Subtotal	\$ 2,778,236	\$ 2,778,236	\$ -
County-Funded Elements	\$ 348,215	\$ 348,215	\$ -
Total Sources of Capital Funding	\$ 3,126,451	\$ 3,126,451	\$ -

1 The FTA New Starts commitment under the FFGA is limited to Phase 1.

2 The total of \$323.3 million does not include \$150 million that has been provided by the Commonwealth to pay interest on DTR revenue bonds.

3 \$8,855,484 Federal (FTA) and \$2,213,871 State of Virginia DRPT.

4 The Airports Authority's contribution to the Project from DTR Revenues is not limited by amount or percentage of Project costs. The amount represents the expected net proceeds from debt secured by DTR Revenues.

FEDERAL FUNDS

There are no federal grants provided for the Project other than the CMAQ funds. The federal portion of that grant is \$8.85 million or 80% of the total. A federal TIFIA loan was sought to provide funding on behalf of the DTR share of costs, as well as to provide loan proceeds for Fairfax County and Loudoun County shares. On February 24, 2014, the Airports Authority and the counties were formally invited to submit an application for a TIFIA loan. The application from the Airports Authority was submitted on March 26, 2014, and Fairfax County and Loudoun County submitted their applications on March 28, 2014, to the USDOT. On April 9, 2014, the entities received notice from USDOT that the TIFIA applications were deemed complete. On May 9, 2014, the USDOT notified the counties and the Airports Authority that the TIFIA loan applications had been approved but that the obligation of funds for the Project was subject to the agreement of terms and conditions acceptable to the USDOT. Negotiations on the USDOT TIFIA loan terms and conditions began in May and were culminated on August 20, 2014, when the Airports Authority and the TIFIA JPO closed on a \$1.278 billion loan. Reporting and requisition activities for the Airports Authority began in August 2014.

In December 2019, the Airports Authority issued \$1.269 billion of Dulles Toll Road Subordinate Lien Revenue and Refunding Bonds, Series 2019B. These bonds were used to repay, in full, the outstanding

balance of the Airports Authority's TIFIA loan along with all accreted or accrued interest. The balance of the bonds after the TIFIA repayment will be used to fund the remaining portion of the Dulles Toll Road Funds.

NON- FEDERAL FUNDS

➤ Commonwealth Funds

Commonwealth capital funds total \$323.3 million. This does not include \$150 million that has been provided by the Commonwealth to pay interest on DTR revenue bonds. In the 2014 Transportation Plan and 2014 Budget, the Commonwealth committed to provide \$300 million in funds to the Project. These funds have been provided over a three year time period, \$100 million per year beginning in 2014. The first \$100 million was received by the Airports Authority in June 2014. The second \$100 million was appropriated in the Commonwealth's fiscal year 2015 budget and received by the Airports Authority in June 2015. The third \$100 million was appropriated in the Commonwealth's fiscal year 2016 and was received by the Airports Authority in June 2016. The Commonwealth previously funded \$23 million in early PE expenses related to the Project. In addition 20% of the CMAQ funding is Commonwealth funds (\$2.2 million).

➤ Northern Virginia Transportation Authority (NVTA)

In October 2015, Fairfax County was awarded a grant from the NVTA. Fairfax County accepted the funds and entered into agreements with NVTA and the Airports Authority to use \$33 million of the funding to offset construction costs related to the Innovation Center Station. In May 2016, Fairfax County was awarded an additional grant from the NVTA. Fairfax County accepted the funds and amended its agreement with the Airports Authority to include the additional funds. This increased the total funding from the NVTA by \$27 million, for a project total of \$60 million. Of the \$60 million NVTA grant award, the Project received \$32 million in 2016, \$11 million in 2017, and \$17 million in 2018.

➤ Dulles Toll Road (DTR) Funds

In order to secure funding for the Project, the Airports Authority and the Commonwealth completed the transfer of the daily operation, maintenance, and control of the DTR from VDOT to the Airports Authority effective November 1, 2008, in accordance with the December 2006 agreement between VDOT and the Airports Authority. As called for in the agreement with VDOT, all DTR revenue collected by the Airports Authority will be used to maintain and operate as well as improve the DTR and to fund transportation improvements within the Dulles Corridor including the Project.

In November 2013, the Airports Authority sold \$150 million of short-term notes secured by DTR revenues. Proceeds from the transaction will be used to fund Phase 2 capital expenditures incurred prior to the closing of long-term project financing. An additional \$150 million of interim financing has been authorized by the Airports Authority Board of Directors.

On July 1, 2014, the Airports Authority extended the existing \$300,000,000 Commercial Paper Program with JP Morgan for one year to provide a contingency source of funds for the Project. On July 29, 2015, the Airports Authority extended the Commercial Paper Program with JP Morgan until August 11, 2016. In June 2016, the Airports Authority extended the Commercial Paper Program with

JP Morgan until August 2018. In April 2018, the Commercial Paper Program was extended to April 2020.

➤ **Aviation Funds**

Pursuant to the July 2007 funding agreement, the Airports Authority agreed to fund 4.1% of the costs associated with both Phases 1 and 2 combined. This amount is estimated at \$233 million and will be used to fund Phase 2 costs. The Airports Authority's contribution to Phase 2 commenced in Q4 2015. The Airports Authority has submitted contributions of \$141.1 million for costs incurred through September 2019.

➤ **Fairfax County Funds**

Pursuant to the July 2007 funding agreement, Fairfax County agreed to fund 16.1% of the costs associated with both Phases 1 and 2 combined. This amount is estimated at \$916 million of which \$516 million is anticipated to fund Phase 2 costs. Fairfax County's contribution to Phase 2 of the Project commenced in Q1 2015.

Fairfax County and the TIFIA JPO closed on a \$403 million loan in December 2014, covering about 44% of the county's total estimated \$916 million share. The county may defer payments on the loan for five years after the Project is completed.

Fairfax plans to use two county sources to repay the loan: money from the Dulles Rail Phase 2 Transportation Improvement District, and Commercial and Industrial Tax Fund. Fairfax County will apply \$218.2 million from this voluntary tax district and \$185.1 million in commercial and industrial taxes. Fairfax County has fully drawn their TIFIA loan but continues to contribute to the Project from other resources.

➤ **Loudoun County Funds**

Pursuant to the July 2007 funding agreement, Loudoun County agreed to fund 4.8% of the costs associated with Phases 1 and 2 combined. This amount is estimated at \$273 million and will be used primarily to fund Phase 2 costs. Loudoun County's contribution to Phase 2 commenced in Q1 2015.

Loudoun County and the TIFIA JPO closed on a \$195 million loan in December 2014. The Metrorail Service Districts around the future Loudoun County stations were created to pay the county's share of the Silver Line construction and for the ongoing costs of providing rail service. A real estate surtax of up to 20 cents per \$100 of assessed value will be levied on property in the districts. Loudoun County has fully drawn their TIFIA loan but continues to contribute to the Project from other resources.

6. PROJECT BUDGET

The overall original program budget for the Project is shown in Table 15 below. It is split into the following budget items - Package A, Packages S and B, WMATA (including the railcars), and “Other Project-Related Items” which includes Right-of-Way, PE, Project Management, and Contingency. Subsequently some of the scope from Package A was taken out and awarded separately under Package G and Package P. The five garages are being constructed by Fairfax and Loudoun Counties.

Table 16 - Overall Original Program Budget

BUDGET ITEM	AMOUNT
Package A	\$ 1,193,777,000
Packages S and B	\$ 273,280,530
WMATA	\$ 305,324,718
Other Project Related Items*	\$ 1,005,853,316
TOTAL	\$ 2,778,235,564
Five Parking Garages (by others)	\$ 348,215,194
*Includes Right-of-Way, Preliminary Engineering, Project Management and Contingency.	

PROJECT COSTS

The Project Cost Summary shown in Table 17 summarizes the Project costs for all Packages broken into FTA’s Standard Cost Category (SCC) codes. Tables 18 through 21 show the cost summaries by Package.

Table 17 - Project Cost Summary by SCC Code, April 2020

FTA SCC CODE	DESCRIPTION	ORIGINAL BUDGET ¹	BASELINE BUDGET ²	EXPENDITURE TO DATE ⁴	ESTIMATE AT COMPLETION ⁵
10	Guideway and Track Elements	\$ 344,946,326	\$ 167,928,670	\$ 194,306,003	\$ 205,513,934
20	Stations	\$ 228,424,057	\$ 231,928,000	\$ 225,365,562	\$ 239,659,322
30	Yards, Shops, Administration Buildings	\$ 229,857,097	\$ 213,730,843	\$ 228,789,194	\$ 239,526,155
40	Site Work and Utility Relocation	\$ 394,075,868	\$ 571,790,853	\$ 696,051,241	\$ 745,194,868
50	Systems	\$ 193,794,178	\$ 215,516,247	\$ 200,305,252	\$ 230,470,313
60	Right of Way Acquisition	\$ 58,523,267	\$ 58,600,000	\$ 27,514,785	\$ 56,284,200
70	Vehicles	\$ 212,765,000	\$ 213,613,334	\$ 136,827,009	\$ 187,489,735
80	Professional Services	\$ 564,398,592	\$ 577,387,366	\$ 620,855,546	\$ 667,741,167
90	Contingency ³	\$ 551,451,179	\$ 527,740,251	\$ -	\$ 206,355,870
TOTAL PROJECT COST		\$ 2,778,235,564	\$ 2,778,235,564	\$ 2,330,014,592	\$ 2,778,235,564

1. Original Budget is based on Table 2-1 "Program Budget Breakdown" of RCMP Rev 1c submitted to FTA in November 2013.

2. Baseline Budget reflects cost loading of Package A baseline schedule approved in February 2014 and redistribution of spare parts budget. Baseline Budget for Packages B and S is adjusted to matched the Contract Price. Baseline Budget for Contingency is adjusted by \$9.8 million increase which is the net of the underrun in Package S and overrun in Package B. Baseline Budget for Contingency is further adjusted by \$33.6 million decrease to fund Packages G and P.

3. All of the contingency resides in SCC 90.

4. Package A expenditure to date includes \$5 million of retainage released in December 2014 and \$14.7 million retainage released in December 2018 with October 2018 payments. Excludes \$10.9 million in Betterments.

5. Estimate at Completion includes Baseline Budget plus any changes funded via contingency drawdown requests and budget transfer requests. Excludes \$11.0 million in Betterments.

➤ Package A

Table 18 shows the cost summary for Package A displayed by FTA's SCC codes. The baseline budget for Package A is \$1,177,777,000. As of *April 30, 2020*, \$1,371,302,023 has been expended for work through *February 2020*. The estimate at completion is \$1,433,677,828, which includes \$119,476,853 in estimated design costs and \$1,314,200,975 in other estimated costs.

Table 18 - Package A Cost Summary by SCC Code, April 2020

FTA SCC CODE	DESCRIPTION	ORIGINAL BUDGET ¹	BASELINE BUDGET ²	EXPENDITURE TO DATE ³	ESTIMATE AT COMPLETION ⁴
10	Guideway and Track Elements	\$ 340,953,449	\$ 163,928,670	\$ 194,306,003	\$ 204,113,934
20	Stations	\$ 224,432,514	\$ 223,697,000	\$ 223,527,312	\$ 234,018,510
30	Yards, Shops, Administration Buildings	\$ 377,285	\$ -	\$ -	\$ -
40	Site Work and Utility Relocation	\$ 352,759,752	\$ 509,201,330	\$ 648,514,128	\$ 669,517,465
50	Systems	\$ 172,044,132	\$ 188,997,000	\$ 189,880,975	\$ 206,551,066
60	Right of Way Acquisition	\$ -	\$ -	\$ -	\$ -
70	Vehicles	\$ -	\$ -	\$ -	\$ -
80	Professional Services	\$ 87,209,868	\$ 91,953,000	\$ 115,073,606	\$ 119,476,853
90	Contingency	\$ -	\$ -		\$ -
TOTALS		\$ 1,177,777,000	\$ 1,177,777,000	\$ 1,371,302,023	\$ 1,433,677,828

1. Original Budget is based on Table 2-1 "Program Budget Breakdown" of RCMP Rev 1c submitted to FTA in November 2013.

2. Baseline Budget reflects cost loading of Package A baseline schedule approved in February 2014 and redistribution of spares parts budget. This reflects the original contract amount.

3. Expenditure to date includes \$5 million of retainage released in December 2014 and \$14.7 million retainage released in December 2018 with October 2018 payments. Excludes \$10.9 million in Betterments.

4. Estimate at Completion includes Baseline Budget plus any changes funded via contingency drawdown requests and budget transfer requests. Excludes \$11.0 million in Betterments.

➤ Package B

Table 19 shows the Cost Summary for Package B displayed by FTA's SCC codes. The baseline budget for Package B is \$252,989,000. As of *April 30, 2020*, \$278,672,738 has been expended for work through *February 2020*. The estimate at completion is \$302,599,202, which includes \$29,303,310 in estimated design costs and \$273,295,892 in other estimated costs.

Table 19 - Package B Cost Summary by SCC Code, April 2020

FTA SCC CODE	DESCRIPTION	ORIGINAL BUDGET ^{1 3}	BASILINE BUDGET ²	EXPENDITURE TO DATE	ESTIMATE AT COMPLETION ⁴
10	Guideway and Track Elements	\$ -	\$ -		\$ -
20	Stations	\$ -	\$ -		\$ -
30	Yards, Shops, Administration Buildings	\$ 202,977,283	\$ 201,238,645	\$ 221,080,968	\$ 229,208,457
40	Site Work and Utility Relocation	\$ 25,772,661	\$ 23,296,613	\$ 27,219,714	\$ 41,314,984
50	Systems	\$ -	\$ 2,772,451	\$ 2,014,190	\$ 2,772,451
60	Right of Way Acquisition	\$ -	\$ -		\$ -
70	Vehicles	\$ -	\$ 1,558,000		\$ -
80	Professional Services	\$ 20,530,586	\$ 24,123,291	\$ 28,357,866	\$ 29,303,310
90	Contingency	\$ -	\$ -		\$ -
TOTALS		\$ 249,280,530	\$ 252,989,000	\$ 278,672,738	\$ 302,599,202

1. Original Budget is based on Table 2-1 "Program Budget Breakdown" of RCMP Rev1c submitted to FTA in November 2013.
2. Baseline Budget reflects cost loading of Package B baseline schedule approved in March 2015. This reflects the original contract amount.
3. Original Budget includes \$500,000 for the Route 606 improvements at Rail Yard that is now performed outside Package B.
4. Estimate at Completion includes Baseline Budget plus any changes funded via contingency drawdown requests and budget transfer requests.

➤ Package G

Table 20 shows the Cost Summary for Package G displayed by FTA's SCC codes. The baseline budget for Package G is \$6,966,000. As of *April 30, 2020*, \$3,581,111 has been expended for work through *March 2020*. The estimate at completion is \$6,975,812, which includes \$820,000 in estimated design costs and \$6,155,812 in other estimated costs. *The estimate at completion is reduced due to revised requirements for waterproofing and flashing resulting in a credit of \$16,038, see Table 30.*

Table 20 - Package G Cost Summary by SCC Code, April 2020

FTA SCC CODE	DESCRIPTION	ORIGINAL BUDGET ¹	BASILINE BUDGET ²	EXPENDITURE TO DATE	ESTIMATE AT COMPLETION
10	Guideway and Track Elements				
20	Stations		\$ 4,231,000	\$ 1,838,250	\$ 4,240,812
30	Yards, Shops, Administration Buildings				
40	Site Work and Utility Relocation		\$ 1,915,000	\$ 963,861	\$ 1,915,000
50	Systems				
60	Right of Way Acquisition				
70	Vehicles				
80	Professional Services		\$ 820,000	\$ 779,000	\$ 820,000
90	Contingency				
TOTALS		\$ -	\$ 6,966,000	\$ 3,581,111	\$ 6,975,812

1. Original Budget was zero since this Package was not part of original packaging for Phase 2
2. Baseline budget was established by drawing down from Phase 2 contingency funds.

➤ Package P

Table 21 shows the Cost Summary for Package P displayed by FTA's SCC codes. The baseline budget for Package P is \$26,586,161. As of *April 30, 2020*, \$13,511,810 has been expended for work through *March 2020*. The estimate at completion is \$25,099,181, which includes \$1,908,723 in

estimated design costs and \$23,190,458 in other estimated costs. *The estimate at completion is reduced due to a credit of \$709,334 from the Change “34.5 kV ductbank at Site 2-7C-4 (Construction)”, see Table 32.*

Table 21 - Package P Cost Summary by SCC Code, April 2020

FTA SCC CODE	DESCRIPTION	ORIGINAL BUDGET ¹	BASELINE BUDGET ²	EXPENDITURE TO DATE	ESTIMATE AT COMPLETION
10	Guideway and Track Elements				
20	Stations				
30	Yards, Shops, Administration Buildings				
40	Site Work and Utility Relocation		\$ 24,715,161	\$ 11,874,273	\$ 23,190,458
50	Systems				
60	Right of Way Acquisition				
70	Vehicles				
80	Professional Services		\$ 1,871,000	\$ 1,637,537	\$ 1,908,723
90	Contingency				
TOTALS		\$ -	\$ 26,586,161	\$ 13,511,810	\$ 25,099,181

1. Original Budget was zero since this Package was not part of original packaging for Phase 2

2. Baseline budget was established by drawing down from Phase 2 contingency funds.

MONTHLY COST REPORT

Table 22 summarizes Project cost information in a work breakdown structure that represents various Project agreements and Airports Authority administrative services, and excludes finance costs. Furthermore, costs variances found in line item comparisons of the Original/Baseline Budget amount and the Estimate at Completion are offset by funding from the contingency line item, leaving the Original/Baseline Budget amount equal to the Estimate at Completion. Package P was awarded on June 14, 2018, for \$26.6 million. Package G was awarded on August 15, 2018 for \$7.0 million.

Table 22 - Monthly Cost Report April 2020

DESCRIPTION	ORIGINAL BUDGET	BASELINE BUDGET ^{3,5}	EXPENDITURE TO DATE ⁴	ESTIMATE AT COMPLETION ⁶	PERCENT OF EAC EXPENDED TO DATE
Design-Build					
Design Build Main Line - Package A	\$ 1,177,777,000	\$ 1,177,777,000	\$ 1,371,302,023	\$ 1,433,677,828	
Commodity Escalation - Package A	\$ 16,000,000	\$ 16,000,000	\$ -	\$ 5,600,000	
Dulles Airport Windscreens - Package G		\$ 6,966,000	\$ 3,581,111	\$ 6,975,812	
Stormwater Management Ponds - Package P		\$ 26,586,161	\$ 13,511,810	\$ 25,099,181	
Subtotal Design-Build Main Line	\$ 1,193,777,000	\$ 1,227,329,161	\$ 1,388,394,944	\$ 1,471,352,821	
Yard - Package B + Yard Soil Preparation - Package S	\$ 269,280,530	\$ 258,939,297	\$ 285,123,052	\$ 309,049,516	
Commodity Escalation - Package B	\$ 4,000,000	\$ 4,000,000	\$ -	\$ 1,328,000	
Subtotal Design-Build Yard	\$ 273,280,530	\$ 262,939,297	\$ 285,123,052	\$ 310,377,516	
Design-Build Contracts Total	\$ 1,467,057,530	\$ 1,490,268,458	\$ 1,673,517,996	\$ 1,781,730,337	94%
Right of Way					
Parcels & Project Management	\$ 58,600,000	\$ 58,600,000	\$ 27,514,785	\$ 56,284,200	
Right Of Way Total	\$ 58,600,000	\$ 58,600,000	\$ 27,514,785	\$ 56,284,200	49%
WMATA Agreement					
Vehicles	\$ 205,868,200	\$ 205,868,200	\$ 136,141,452	\$ 181,302,601	
WMATA Non Revenue Vehicles	\$ 9,250,751	\$ 9,620,781	\$ 2,737,205	\$ 9,620,781	
WMATA Project Management and Other Costs	\$ 90,205,767	\$ 89,835,737	\$ 67,600,136	\$ 89,835,737	
WMATA Agreement Total	\$ 305,324,718	\$ 305,324,718	\$ 206,478,792	\$ 280,759,119	74%
Preliminary Engineering					
Preliminary Engineering Total	\$ 75,000,000	\$ 75,000,000	\$ 73,266,056	\$ 75,000,000	98%
Airports Authority Services					
Airports Authority Project Management	\$ 64,620,000	\$ 64,620,000	\$ 73,241,199	\$ 80,081,913	
Project Management Support	\$ 140,000,000	\$ 140,000,000	\$ 202,115,804	\$ 204,560,000	
Other Costs ¹	\$ 116,182,137	\$ 116,682,137	\$ 73,879,960	\$ 93,464,125	
Airports Authority Services Total	\$ 320,802,137	\$ 321,302,137	\$ 349,236,963	\$ 378,106,038	92%
Contingency					
Contingency Total	\$ 551,451,179	\$ 527,740,251		\$ 206,355,870	
TOTAL PROJECT COSTS	\$2,778,235,564	\$2,778,235,564	\$2,330,014,592	\$2,778,235,564	91%²

1. Includes Rent, Relocation, OCIP, VDOT, Dulles Rail Consultants, Testing Consultant, DGS, TRIP II, DEQ, Airports Authority Permits/Inspection, Testing Power and Historic/Archaeological Mitigation. Estimate at Completion includes Dominion Virginia Power Route 28 to Frying Pan Road Ductbank Installation also.

2. This percentage does not include Contingency.

3. Baseline Budget for Packages A, G, P, B and S reflects the Contract Price. Baseline Budget for Contingency is adjusted by \$9.8 million increase which is the net of the underrun in Package S and overrun in Package B. Baseline Budget for Contingency is further adjusted by \$33.6 million decrease to fund Packages G and P.

4. Package A expenditure to date includes \$5 million of retainage released in December 2014 and \$14.7 million retainage released in December 2018 with October 2018 payments. Excludes \$10.9 million in Betterments.

5. Baseline Budget for WMATA Agreement is adjusted to align with WMATA's distribution of original budget in invoice #2.

6. Estimate at Completion includes Baseline Budget plus any changes funded via contingency drawdown requests and budget transfer requests. Excludes \$11.0 million in Betterments.

Table 23 shows the betterments requested by Fairfax and Loudoun Counties and the allocation to Packages A and B Design-Build scope. A betterment is a request by any party for the performance of work by the Project for the benefit of the requestor that is above and beyond the Project scope. Betterments are funded by the requestor of the betterment, not from the Project budget or associated contingency funds. Each betterment is assigned a betterment authorization request (BAR) number, as shown in Table 23. Betterments and CNPAs are discussed in detail in RCMP, Revision 2.0. As of April 30, 2020, \$11,246,302 has been received and \$10,923,649 has been expended on betterments.

Table 23 - Betterments Requested by Project Partners through April 2020

BAR #	BDR #	DESCRIPTION	REQUESTOR	AUTHORIZED BUDGET	FUNDS RECEIVED TO DATE	ALLOCATED TO				EXPENDITURE TO DATE
						PKG	CO#	DL #	AMOUNT	
001	001	Town Center Parkway Cost Study	Fairfax	\$ 234,067	\$ 234,067	A	015		\$ 234,067	\$ 234,067
002, 003	002, 003	Town Center Parkway Rail Support Structure	Fairfax	\$ 7,425,000	\$ 7,425,000	A	075	037	\$ 7,425,000	\$ 7,425,000
002, 003	009	Town Center Parkway Rail Support Structure - Credit for unused allowance items	Fairfax	Incl in #003	\$ -	A	239		\$ (225,000)	\$ (225,000)
004	004	Relocate Utilities under Transit Connector Bridge ¹	Loudoun	\$ 525,000	\$ 577,500	A	292	066	\$ 525,000	\$ 525,000
005	005	Construction of Ashburn Station Connector Bridge Pier 2 ¹	Loudoun	\$ 420,000	\$ 465,028	A	092		\$ 420,000	\$ 420,000
006	006	Bridge Joints on Bridges over the Dulles Corridor Metrorail Phase 2 Project	MWAA	\$ 2,305,500	\$ 175,000	A	144	110	\$ 175,000	\$ 175,000
006	008	Additional Substructure Work on Adjacent VDOT projects at Reston Parkway and Monroe Street Bridges. Original scope in CO#144	MWAA	Incl in #006	\$ 40,057	A	248		\$ 40,057	\$ 40,057
007	007	Board Resolution 15-36 Adopting 2016 Budget - Sound Barrier Walls	MWAA	\$ 936,570	\$ 882,250	A	NA	NA	\$ 936,570	\$ 882,250
008	010	Provision of Conduit System for Parking Garage Revenue Control (PARC) Systems	Loudoun	\$ 482,400	\$ 482,400	A	262		\$ 482,400	\$ 482,400
009 ²	011	Reston North Pavilion Foundation and Pier for Future Pedestrian Bridge Support	Reston VA 939, LLC	\$ 725,000	\$ 725,000	A	318	241	\$ 725,000	\$ 725,000
010	012	Loudoun Gateway Station Pedestrian Bridge Connection Change	Loudoun	\$ 40,000	\$ 40,000	A	291	245	\$ 40,000	\$ 39,875
011 ³	013	Edmund Halley Drive Roundabout Relocation Change	Reston Crossing, LP	\$ 200,000	\$ 200,000	A	294	242, 286	\$ 200,000	\$ 200,000
012	014	Installation of Intrusion detection Signal Pathway	Loudoun	\$ 23,000	\$ -	A		331	\$ 23,000	\$ -
TOTALS				\$ 13,316,537	\$ 11,246,302				\$ 11,001,094	\$ 10,923,649

BAR=Betterment Authorization Request, BDR=Betterment Drawdown Request

1. Funds received to date include 10% contingency per the funding agreement.
2. Total cost of \$778,000 split between requestor and ROW budget.
3. Total cost of \$980,000 split between requestor and ROW budget.

Table 24 shows actual payments for the past four months indicating trends. The expenditures in *April 2020* are \$7.2 million *higher* than in *March 2020*. In *April 2020*, Design-Build included payment for costs incurred in *February 2020* on Packages A and B and costs incurred in *March 2020* on Packages G and P. ‘All Other’ costs included payments primarily for the Airports Authority, PMSS, and VDOT.

Table 24 - Actual Payments through April 2020

DESCRIPTION	January 2020	February 2020	March 2020	April 2020
Design-Build				
Package A ³		\$ 1,064,581	\$ (311,217)	\$ 1,778,144
Package G ⁴	\$ 384,879	\$ -	\$ 523,640	\$ 512,974
Package P ⁴	\$ 469,064	\$ -	\$ 2,004,536	\$ 1,653,728
Package B	\$ 820,753	\$ 810,203	\$ 274,142	\$ 466,137
Package S				
Right of Way	\$ 84,291	\$ 297,550	\$ 213,338	\$ 201,076
WMATA Agreement	\$ 1,480,306	\$ 5,199,934	\$ 665,084	\$ 7,058,253
All Other ²	\$ 7,135,501	\$ 4,128,119	\$ 4,482,083	\$ 3,384,752
TOTAL¹	\$ 10,374,794	\$ 11,500,386	\$ 7,851,607	\$ 15,055,063

1) Excludes Betterments.

2) January 2020 actual costs for All Other costs include Airports Authority's cost allocation to the Project for 2019.

3) Negative costs in March 2020 for Package A are due to \$630,000 adjustments for betterment scope.

4) March 2020 actual costs for Packages G and P include two months (January and February 2020) of approved costs.

CHANGE ORDERS

The change order log shows changes which have been approved or have been fully negotiated and are in the Project team's preparation and execution process per the contract. The change order logs also show the cost breakdown of changes by Federal (activity eligible for federal funding), Betterments and Concurrent Non-Project Activities (CNPAs).

RCMP, Revision 1d, included changes to P2M 5.07, Management of Project Contingency, clarifying that the Airports Authority shall seek a formal commitment from the stakeholder requesting a CNPA or a betterment to fully fund these items prior to issuing directions to the contractors to proceed with the work.

Changes under evaluation require an independent cost estimate (ICE) and a verification analysis resulting in validation of the contractor's proposed change amount or a negotiated settlement. When the contractor's proposal is greater than the Project team's assessed value, this results in a more definitive scope review, validation of unit rates followed by a negotiation. These differences are addressed by negotiations between Project's estimating/design staff, and the contractor's staff to come to agreement on scope definition, quantities, unit rates, and estimator's assumptions to narrow the differences.

➤ Package A

As shown in Table 25, *one* change order was agreed upon and *three* change orders were approved for Package A in April 2020. *Twelve* change orders that were agreed upon through March 2020 are pending approval, subject to CRC's concurrence on contract change order language and CRC's internal requirement to have schedule fragnets and proposed DBE participation accepted. Change orders *that were executed through March 2020* were collapsed for this report but are included in the totals.

Table 25 - Package A Change Order Log, April 2020

CO	RFC	DL	RFC DATE	DESCRIPTION	SOURCE ORGANIZATION	CHANGE TYPE	AGREED CHANGE				DATE APPROVED
							TOTAL COST	FEDERAL	BETTERMENT	DATE	
159				Limited Authorization for Temporary Shoulder Closure	Trip II Greenway	OTH	\$ -	\$ -	\$ -		
170	0209	164	3/4/16	Additional Station Signs Identified in Phase 1 to be added to Phase 2	WMATA	DDL	\$ 200,000	\$ 200,000	\$ -	6/27/16	
228	0282	134	12/19/16	Utilities to PSI Trailers at Pacific Boulevard	Project team	PAC	\$ 140,000	\$ 140,000	\$ -	3/28/17	
332	0217	250,267	3/14/18	Added Snow Guards to Pedestrian Bridge Roofs	CRC	DDL	\$ 340,000	\$ 340,000	\$ -	5/3/19	
	0341	270	7/20/17	Geotechnical DSC at Innovation Center and Herndon (Part B)	Project team / CRC	CRQ	\$ 4,975,000	\$ 4,975,000	\$ -		
	0459		10/11/18	Auxiliary Signage at Secondary Entrance Pavilions for Emergency Responders	Project team / CRC	RRQ	\$ 15,000	\$ 15,000	\$ -		
	0465	292	11/1/18	Omitted Work at Ashburn South Kiss & Ride Lot	Loudoun County	PAC	\$ (9,300)	\$ (9,300)	\$ -		
	0469	306, 308	11/16/18	Impacts to CRC from Battery Failure During Testing at Herndon Station	WMATA	OTH	\$ 74,000	\$ 74,000	\$ -		
	0470		11/16/18	DSC-Irrigation Connection at Dulles Hourly Lot Irrigation Point of Connection	Project team / CRC	CRQ	\$ 64,000	\$ 64,000	\$ -		
	0475		11/15/18	Pedestrian Tunnel Area Lighting Change	Project team	BET	\$ 10,000	\$ 10,000	\$ -		
	0477		12/19/18	Herndon Station North Access - Parcels 225 and 227 PIP - Cost Reimbursement by CRC	CRC	PAC	\$ (57,000)	\$ (57,000)	\$ -		
347	0512	323	7/25/19	Scheduled Installation of Art-in-Transit at Innovation Center Station after SSCD	CRC	CRQ	\$ -	\$ -	\$ -	8/19/19	
372	0541	089, 313	1/10/20	Engineering Recommendations from Storm Pipe Video Analysis	Project team	CRQ	\$ 171,000	\$ 171,000	\$ -	3/5/20	
373	0544	333	2/11/20	Elevator Repairs at Loudoun Gateway Pavilion - Downspout	Project team / CRC	OTH	\$ 24,000	\$ 24,000	\$ -	2/28/20	
374		121		Temporary Bus Stop at Herndon South Pavilion Area	Project team	DDL	\$ -	\$ -	\$ -		3/16/20
375	0237	253	1/13/20	UL Listing for Fire Alarm Conduit at Stations and Wayside Facilities	WMATA	RRQ	\$ 785,000	\$ 785,000	\$ -	3/23/20	4/15/20
376	0358	275	11/1/19	DSC - Utility Relocation at Reston South - Sunrise Valley Drive and Edmund Halley Drive	Project team / CRC	CRQ	\$ 1,790,000	\$ 1,790,000	\$ -	3/23/20	4/29/20
TBD	0351		11/22/17	Metal Ceiling Panel Thickness	CRC	OTH	\$ (405,000)	\$ (405,000)	\$ -	12/1/17	
TBD	0395	266	11/13/19	Cathodic Protection for Colonial and Columbia Gas Lines	Project team / CRC	CRQ	\$ -	\$ -	\$ -	3/23/20	
TBD	0411		7/3/18	Disposition of Fabricated FIB96	Project team		\$ 3,600,000	\$ 3,600,000	\$ -	5/6/19	
TBD	0546		2/14/20	Ultrasonic Testing at Signal Pole Anchor Bolts	VDOT	RRQ	\$ 8,900	\$ 8,900	\$ -	3/17/20	
TBD	0547		2/24/20	Tactile Signage	CRC	RRQ	\$ 163,000	\$ 163,000	\$ -	3/19/20	

Change orders executed through March 2020 are collapsed in the table but are included in the totals except CO-374 approved in March 2020 but not reported in March 2020.

Change Type Legend:

BET= Betterment

CRQ= Contract Requirements

DDL= Design Development

OTH= Other

PAC= Partner Agency Change

RRQ= Revised Requirements

Total Approved through March 2020*: \$ 252,420,522 \$ 242,078,998 \$ 10,341,524**

Total Approved in April 2020: \$ 2,575,000 \$ 2,575,000 \$ -

Total Approved through April 30, 2020: \$ 254,995,522 \$ 244,653,998 \$ 10,341,524

Total in Process in March 2020: \$ 9,313,600 TBD TBD

Total: \$ 264,309,122 TBD TBD

Total Original Federal Baseline Budget: \$ 1,177,777,000 \$ 1,177,777,000

Approved Changes through April 30, 2020 21.65% 20.77%

Approved Changes in April 2020: \$2,575,000 \$2,575,000

Changes in April 2020: 0.22% 0.22%

MONTHLY PROGRESS REPORT for April 2020

From December 2018, the Airports Authority's Contracting Officer started issuing Contracting Officer Change Order (COCO) for many of the changes that were yet to be settled. The Contractor retains the right to seek additional compensation for this change under Article 19 of the Contract by reaching an agreement with the Airports Authority on the amount of additional compensation and under Article 28 of the Contract by pursuing a claim for the additional compensation.

As shown in Table 26, 26 COCOs were issued for Package A as of April 2020. *COCOs that were closed by change orders executed through March 2020 were collapsed for this report but are included in the totals.*

MONTHLY PROGRESS REPORT for April 2020**Table 26 - Package A Contracting Officer Change Orders Log, April 2020**

COCO #	COCO DATE	CO #	DL #	RFC #	DESCRIPTION	SOURCE ORGANIZATION	CHANGE TYPE	AMOUNT	SETTLED	REMAINING AMOUNT
001	12/10/18	332	270	341	Geotechnical DSC at Herndon and Innovation Stns Utility Crossing	Project team / CRC	CRQ	\$ 3,950,000	\$ -	\$ 3,950,000
		TBD		411	Disposition of Fabricated FIB96 Girders	Project team		\$ 3,200,000	\$ -	\$ 3,200,000
		TBD	266	395	Cathodic Protection for Colonial and Columbia Gas Lines	Project team / CRC	CRQ	\$ -	\$ -	\$ -
008	3/1/19		147	0485	Tie-Breaker Station Rear Access Enclosures - Construction (Also see COCO-015)	WMATA	PAC	\$ 225,000	\$ -	\$ 225,000
009	2/7/19		135		Additional Revisions to Traction Elevator Specifications	WMATA	PAC	\$ 170,000	\$ -	\$ 170,000
010	2/27/19	376	275	0358	DSC - Utility Relocation at Reston South - Sunrise Valley Drive and Edmund Halley Drive	Project team / CRC	CRQ	\$ 292,000	\$ 292,000	\$ -
011	3/21/19	332	250, 267	0217	Added Snow Guards to Pedestrian Bridge Roofs	CRC	DDL	\$ 138,000	\$ -	\$ 138,000
013	11/25/19		086	0120	Dulles Airport Station Screenwall Glazing Deletion	Project team	RRQ	\$ (2,932,500)	\$ -	\$ (2,932,500)
015	11/25/19		147	0485	Tie-Breaker Station Rear Access Enclosures (Additional funding)	WMATA	PAC	\$ 996,700	\$ -	\$ 996,700
016	11/25/19		269, 317	0444	Light Pole Code Issue	Project team	RRQ	\$ 240,800	\$ -	\$ 240,800
018	11/25/19		117	0519	Mitigation for Roadway Configuration Changes at Reston Parkway & Sunrise Valley Drive	Project team	DDL	\$ (1,364,200)	\$ -	\$ (1,364,200)
019	11/26/19		225	0343	Building Automation System (BAS) Modifications for Stations and Wayside Facilities	WMATA	DDL	\$ 1,694,300	\$ -	\$ 1,694,300
020	12/13/19			0518	Recommended Spare Parts and Special Tools List	Project team / CRC	CRQ	\$ 456,329	\$ -	\$ 456,329
022	12/12/19	375	253	0237	UL Listing for Fire Alarm Conduit at Stations and Wayside Facilities	WMATA	RRQ	\$ 370,900	\$ 370,900	\$ -
023	12/12/19		328	0525	WMATA Oversight - Emergency Trip Station Power Removal Maps/Decals (Also see COCO-025)	CRC	OTH	\$ 73,200	\$ -	\$ 73,200
025	2/26/20		328	0525	WMATA Oversight - Emergency Trip Station Power Removal Maps/Decals	CRC	OTH	\$ 38,000	\$ -	\$ 38,000
026	4/23/20	TBD		0547	Tactile Signage	CRC	RRQ	\$ 163,000	\$ -	\$ 163,000
Total								\$ 21,611,796	\$ 14,563,167	\$ 7,048,629

Remaining amount represent yet to be settled values of the COCOs.

COCOs that were closed by change orders executed through March 2020 are collapsed in this table but are included in the totals.

Change Type Legend:

BET= Betterment

CRQ= Contract Requirements

DDL= Design Development

OTH= Other

PAC= Partner Agency Change

RRQ= Revised Requirements

Table 27 shows requests for changes (RFC) that are under evaluation for the Package A contract.

Table 27 - Package A Change Orders Under Evaluation Log, April 2020

RFC NO.	RFC REV. NO.	RFC DATE	RFC VALUE	DESCRIPTION	INITIATOR	CHANGE TYPE	STATUS SUMMARY	COMMENTS/NOTES
0085	1	10/6/15	\$ 270,770	Delete remaining design and engineering for 9 BMPs removed from the Project's SWM design.	Project team	CC	In-Negotiation	June 2019: Offer made to CRC. 1/16/19: This issue was addressed previously, however was never successfully resolved. 12/5/18: Pre-negotiation position offer (credit of \$122,900) was completed and submitted to management.
0120	1	6/6/16	\$(1,270,645)	Dulles Airport Station Screenwall Glazing Deletion	Project team	CC	In-Negotiation	8/5/19: In-negotiations.
0180	1	6/14/16	\$ (503,453)	Pedestrian Tunnel at Dulles Airport Additional Busing	Dulles Airport Staff	APC	In-Negotiation	Credit change. To be bundled with other Pedestrian Tunnel Changes.
0260	0	10/6/16	\$ (11,419)	Material Price Adjustment - Liquid Asphalt - September 2014 - March 2016	Project team / CRC		Impasse	1/6/20: Changed to Impasse until issues resolved.
0294	0	3/6/17	\$ (182,820)	Material Price Adjustment - Copper Cable and Wire Received through December 2016	Project team		Impasse	1/6/20: Changed to Impasse until issues resolved.
0299	4	11/4/19	\$ 134,282	N08 Herndon Station Automatic Operation	Project team	NIB	In-Negotiation	12/24/19: RFC Proposal Revision 4 increases price by approximately \$109K based on actual costs incurred by CRC's subcontractor.
0343	2	11/5/19	\$ 4,070,246	Building Automation System (BAS) Modifications for Stations and Wayside Facilities	WMATA	DCR	In-Negotiation	8/2/19: Offer sent to CRC based on revised proposal.
0379	0	3/15/18	\$ (239,224)	Material Price Adjustment - Copper Wire and Cable Received from MEC and Ennis through Q3 2017	Project team		Impasse	1/6/20: Changed to Impasse until issues resolved.
0385	0	4/9/18	\$ (59,147)	Material Price Adjustment - Liquid Asphalt - Q2 2016 - Q3 2017	Project team / CRC		Impasse	1/6/20: Changed to Impasse until issues resolved.
0429	0	8/2/18	\$ 353,759	Location of Fire Hydrants at Entrance Pavilions	Project team	DCR	In-Negotiation	4/6/20: Pre-negotiation position signed.
0444	0	8/17/18	\$ 803,228	Light Pole Code Issue	Project team	CCL	In-Negotiation	10/1/19: Revised scope of work is required due to additional merit consideration.
0445	0	2/7/20	\$ 1,732,862	Elevator/Escalator Pit Sump Discharge to Sanitary	Project team	CCL	Pre-Negotiation	Certified proposal submitted 2/11/20. Scoping meeting required due to huge variance between MWAA and CRC.
0480	0	1/18/19	\$ 124,707	Restoring Ashburn South Dirt Haul Road to Original Condition	Loudoun County	APC	Resubmit	3/14/19: Pre-negotiation position is prepared for merited scope/CRC to submit a new RFC for unrelated work included in this RFC.
0485	0	2/20/19	\$ 3,341,128	Tie-Breaker Station Rear Access Enclosures	WMATA	AAC	Pre-Negotiation	CRC PCOs: 820417; 820417B 3/9/20: MWAA-P2-14847 sent to CRC requesting information on MEC's proposal.
0518	1	4/6/20	\$ 1,222,255	Recommended Spare Parts and Special Tools List	Project team / CRC	SP	Pre-Negotiation	4/17/20: DL-344 sent to CRC.
0519	0	8/14/19	\$ 410,223	Mitigation for Roadway Configuration Changes at Reston Parkway & Sunrise Valley Drive	Project team	UPE	In-Negotiation	11/18/19: COCO is prepared.
0520	0	8/16/19	\$ 8,915,056	Recommended Spare Parts and Special Tools - Second Purchase	WMATA	SP	ROM/Pending Final Pricing	4/30/20: Awaiting certified proposal from CRC.
0524	0	9/12/19	\$ 139,134	Additional Utility Relocations-Potential Utility Delay-Sunrise Valley Drive at Roark Drive	Project team	USP	Resubmit	9/30/19: MWAA-P2-13977 - CRC requested to submit revised proposal for gas line relocation only.
0525	2	3/3/20	\$ 355,286	WMATA Oversight - Emergency Trip Station Power Removal Maps/Decals	CRC	NIB	Pre-Negotiation	3/24/20: Hold pending response to email to CRC with questions re: proposal - duplication of efforts between MC Dean and Parsons, LOE and LCATS, etc.
0529	0	10/21/19	\$ 17,300	Installation of Intrusion Alarm Signal Pathway at Loudoun Gateway Pavilion (pedestrian bridge gate @ Loudoun County garage)	CRC	NIB	ROM/Pending Final Pricing	3/13/20: Request to CRC for certified proposal.
0531	0	10/18/19	\$ 161,810	WMATA Revisions to Escalator Control Station Switches and Labels	CRC	AAC	ROM/Pending Final Pricing	3/13/20: Request to CRC for certified proposal.

Table 27 - Package A Change Orders Under Evaluation Log, April 2020, Cont'd.

RFC NO.	RFC REV. NO.	RFC DATE	RFC VALUE	DESCRIPTION	INITIATOR	CHANGE TYPE	STATUS SUMMARY	COMMENTS/NOTES
0535	0	11/5/19	\$ 169,351	Perform Services for Package G Contractor at Dulles Station Screenwall	CRC	APC	ROM/Pending Final Pricing	4/1/20: Requested RFC via MWAA-P2-14944
0536	0	11/4/19	\$ 231,111	Requirement for Granite Curbs at Dulles Station Escalator and Stairway Openings	Project team / CRC	NIB	ROM/Pending Final Pricing	11/27/19: MWAA-P2-14228 issued to request credit proposal for deletion of work at the same location. Partially merited.
0542	0	1/10/20	\$ (246,598)	Credit for Pacific Boulevard Yard Turnover Activities Not Performed (CO-063)	Dulles Airport Staff		Under Scope/ Merit Review	CRC-4880 notified MWAA that CO-063 requires direction by MWAA to restore Pac Blvd Yard.
0545	0	2/12/20	\$ 466,075	Herndon Station South Side Facilities (related to garage relocation).	Fairfax County	ADC	In-Estimating	3/10/20: ICE received. Proposal released to Estimating for Cost Analysis.
0548	0	3/8/20	\$ 27,401	Provision of Lock Cylinders at all Access Panels in Public Areas of Phase 2 Stations	WMATA		Pre-Negotiation	4/17/20: Pre-negotiation position routed for signatures.

Change Category Legend:

ADC = Adjacent Development Change	HMM = Hazardous Materials Mitigation	SBET = Shared Betterment
APC = Adjacent Project Conflict	BET = Individual Betterment	SP = Spare Parts
AAC = Agency Approval Condition	LRC = Law or Regulatory Change	TIA = Time Impact Analysis
AIT = Art in Transit	MCM = Maintenance Cost Mitigation	UPE = Unresolved PE Issue/Error
CCL = Code Compliance	MCO = Minor Change	USP = Utility Self-Performance Payments
CNPA = Concurrent Non-Project Activity	NIB = Not in Base Contract	VE = Value Engineering
CC = Criteria Change	PC = Permit Condition	WD = Weather Delays
DCR = Design Comment Resolution	P1C = Phase 1 Consistency	
DSC = Differing Site Condition	RCM = ROW Cost Mitigation	

➤ **Package B**

As shown in Table 28, two change orders were agreed upon and no change orders were approved for Package B in April 2020. Change orders *that were executed through March 2020* were collapsed for this report but are included in the totals.

Table 28 - Package B Change Order Log, April 2020

CO	RFC	DL	RFC DATE	DESCRIPTION	SOURCE ORGANIZATION	CHANGE TYPE	AGREED CHANGE			DATE APPROVED
							TOTAL COST	FEDERAL	DATE	
120	083	058	01/07/20	Natural Gas Distribution	HP	RRQ	\$ 36,000	\$ 36,000	3/11/20	
121	164	114	12/17/19	SCADA Mapping in Yard Servers	WMATA	RRQ	\$ 56,000	\$ 56,000	2/4/20	
122	167	118	1/22/20	Fire Alarm Dialers	WMATA	RRQ	\$ 17,000	\$ 17,000	3/11/20	
123	169	113	2/10/20	Maintenance of Way Building (MWB) Renegade Parts Washer Relocation	WMATA	RRQ	\$ 53,000	\$ 53,000	4/16/20	
124	154	102	6/25/19	Train Wash Facility (TWF) Low Smoke Zero Halogen	Project team	RRQ	\$ 150,561	\$ 150,561	4/17/20	

Change Type Legend:

BET= Betterment
CRQ= Contract Requirements
DDL= Design Development
OTH= Other
PAC= Partner Agency Change
RRQ= Revised Requirements

Total Approved through March 2020:	\$ 42,367,612	\$ 42,367,612
Total Approved in April 2020:	\$ -	\$ -
Total Approved through April 30, 2020:	\$ 42,367,612	\$ 42,367,612
Total in Process in April 2020:	\$ 312,561	\$ 312,561
Total:	\$ 42,680,173	\$ 42,680,173
Total Original Federal Baseline Budget:	\$ 252,989,000	\$ 252,989,000
Approved Changes through April 30, 2020:	16.75%	16.75%
Approved Changes in April 2020:	\$0	\$0
Changes in April 2020:	0.00%	0.00%

Table 29 shows RFCs that are under evaluation for Package B contract.

Table 29 - Package B Change Orders Under Evaluation Log, April 2020

RFC NO.	RFC REV.	RFC DATE	RFC VALUE	DESCRIPTION	INITIATOR	CHANGE TYPE	STATUS SUMMARY	COMMENTS/NOTES
TBD			\$ -	Schedule Recovery - Global Time Extension Post June 1, 2016			Pre-Negotiation	Change Order 119 was sent to HP. HP and MWA have not come to an agreement on this issue.
087	0	8/22/17	\$ -	Differing Site Conditions - Increased Quantities of Unsuitable Material & Topsoil - Site wide	Project team / HP	DSC	Under Scope/ Merit Review	4/10/20: HP sent Certified Claim - Letter HP_P2B_1887. Under Review.
090	2	1/21/20	\$ 14,376	Car Track Equipment Maintenance (CTEM) Shop Area Changes – Construction	WMATA	CC	Rejected - Revise	4/20/20: Internal meeting held. Drafting letter rejecting HP's RFC Proposal Rev.3
106	0	3/28/18	\$ -	Rock at Off-Site Sanitary Installation	HP	DSC	In-Negotiation	1/6/20: MWA and HP in discussions to settle.
134	0	12/26/18	\$ 198,399	Hardware Standardization with Phase 1	Project Team	CC	Under Scope/ Merit Review	4/10/20: HP has issued Certified Claim for this. HP_P2B_1765. Under Review.
144	1	4/20/20	\$ -	Protection of Wheel and Axle Control Panel	Project Team	CC	Pre-Negotiation	4/21/20: HP revised proposal received. Released to Estimating for CA.
147	0	4/1/19	\$ -	Deletion of Elevated Platforms at SIB Blow Pits	WMATA	CC	In-Negotiation	4/8/20: HP replied through email not accepting MWA's offer and informed that will submit Certified Claim.
153		6/7/19	\$ -	Paving - Mercure Circle - CREDIT	Project team	CC	Rejected - Revise	3/30/20: HP sent a Notice of Claim for this PCO. HP opted out of meeting and will move to a Certified Claim.
155	1	11/22/19	\$ -	Spare Parts and Special Tools List	HP	CC	Under Scope/ Merit Review	3/3/20: DL-125 Issued.
160		10/8/19	\$ -	WMATA Signage Information - 2008 to 2014	HP	CC	Pre-Negotiation	4/13/20: HP has issued a Certified Claim for this issue. 3/31/20: Proposal released to estimating for preparation of a Cost Analysis.
161		10/21/19	\$ -	Public Switching Network Delays - Verizon Communications Utility Service Fee	WMATA	CC	Under Scope/ Merit Review	4/10/20: HP sent Notice of Claim. Under Review.
162		12/9/19	\$ -	Delivery of Permanent Power	HP	CC	Under Scope/ Merit Review	4/13/20: Permanent power position meeting was not held. Postponed by HP.
163		11/27/19	\$ -	Water Service - Test Flow Results	HP	CC	Under Scope/ Merit Review	1/3/20: Merited per engineering. Need scope prepared for ICE.
165		12/9/19	\$ -	Concrete Escalation - June 1, 2016 Delay Costs			In-Negotiation	2/7/20: Offer made to HP in Letter No. HP_P2B_06369 of \$52,633 to settle this change separately or together in total offer of \$1,305,427 with other excluded costs from CO-075.
168	0	1/27/20	\$ -	Cumulative Impact Proposal			Under Scope/ Merit Review	1/30/20: Impact claim received. Under Review.
172		3/31/20	\$ -	SD Memory Cards and Configuration of CCTV Cameras	WMATA	CC	In-Negotiation	4/27/20: In Negotiations.
173		4/8/20	\$ -	Specialty Signage	WMATA	CC	Pre-Negotiation	4/28/20: Meeting cancelled. Scoping meeting scheduled for May 2020.
174		4/3/20	\$ -	Traction Power Monitoring Data Loggers Assist		CC	Under Scope/ Merit Review	4/6/20: New PCO - Merited - preparing SOW to send to Estimating.
175		3/31/20	\$ -	Track Switch Obstruction	HP	CC	Under Scope/ Merit Review	3/31/20: HP proposal received. Under Review.

Change Category Legend:

ADC = Adjacent Development Change
APC = Adjacent Project Conflict
AAC = Agency Approval Condition
AIT = Art in Transit
CCL = Code Compliance
CNPA = Concurrent Non-Project Activity
CC = Criteria Change
DCR = Design Comment Resolution
DSC = Differing Site Condition

HMM = Hazardous Materials Mitigation
BET = Individual Betterment
LRC = Law or Regulatory Change
MCM = Maintenance Cost Mitigation
MCO = Minor Change
NIB = Not in Base Contract
PC = Permit Condition
P1C = Phase 1 Consistency
RCM = ROW Cost Mitigation

SBET = Shared Betterment
SP = Spare Parts
TIA = Time Impact Analysis
UPE = Unresolved PE Issue/Error
USP = Utility Self-Performance Payments
VE = Value Engineering
WD = Weather Delays

MONTHLY PROGRESS REPORT for April 2020

➤ Package G

As shown in Table 30, *one* change order was agreed upon and no change orders were approved for Package G in April 2020.

Table 30 - Package G Change Orders Log, April 2020

CO	RFC	DL	RFC DATE	DESCRIPTION	SOURCE ORGANIZATION	CHANGE TYPE	AGREED CHANGE			DATE APPROVED
							TOTAL COST	FEDERAL	DATE	
001	001		2/14/19	Bird Control Wire Change	Schlosser	RRQ	\$ 25,850	\$ 25,850	10/4/19	11/6/19
002	002		3/6/20	Descope of Waterproofing and Flashing	Project team / Schlosser	RRQ	\$ (16,038)	\$ (16,038)	4/23/20	

Change Type Legend:

BET= Betterment

CRQ= Contract Requirements

DDL= Design Development

OTH= Other

PAC= Partner Agency Change

RRQ= Revised Requirements

Total Approved through March 2020: \$ 25,850 \$ 25,850

Total Approved in April 2020: \$ - \$ -

Total Approved through April 30, 2020: \$ 25,850 \$ 25,850

Total in Process in April 2020: \$ (16,038) \$ (16,038)

Total: \$ 9,812 \$ 9,812

Total Original Federal Baseline Budget: \$ 6,966,000 \$ 6,966,000

Approved Changes through April 30, 2020: 0.37% 0.37%

Approved Changes in April 2020: \$ - \$ -

Changes in April 2020: 0.00% 0.00%

Table 31 shows RFCs that are under evaluation for Package G contract.

Table 31 - Package G Change Orders Under Evaluation Log, April 2020

RFC NO.	RFC REV.	RFC DATE	RFC VALUE	DESCRIPTION	INITIATOR	CHANGE TYPE	STATUS SUMMARY	COMMENTS/NOTES
004	1	4/21/20	\$ 166,634	Project Access Delays	Schlosser	TIA	Under Scope/ Merit Review	3/23/20: RFC under review.

Change Category Legend:

ADC = Adjacent Development Change

APC = Adjacent Project Conflict

AAC = Agency Approval Condition

AIT = Art in Transit

CCL = Code Compliance

CNPA = Concurrent Non-Project Activity

CC = Criteria Change

DCR = Design Comment Resolution

DSC = Differing Site Condition

HMM = Hazardous Materials Mitigation

BET = Individual Betterment

LRC = Law or Regulatory Change

MCM = Maintenance Cost Mitigation

MCO = Minor Change

NIB = Not in Base Contract

PC = Permit Condition

P1C = Phase 1 Consistency

RCM = ROW Cost Mitigation

SBET = Shared Betterment

SP = Spare Parts

TIA = Time Impact Analysis

UPE = Unresolved PE Issue/Error

USP = Utility Self-Performance Payments

VE = Value Engineering

WD = Weather Delays

➤ Package P

As shown in Table 32, *two* change orders were agreed upon and *one* change order was approved for Package P in April 2020.

Table 32 - Package P Change Orders Log, April 2020

CO	RFC	DL	RFC DATE	DESCRIPTION	SOURCE ORGANIZATION	CHANGE TYPE	AGREED CHANGE			DATE APPROVED
							TOTAL COST	FEDERAL	DATE	
001				Revised DBE Participation Provision and MWWA Construction Safety Manual	Project team	OTH	\$ -	\$ -		6/20/18
002	006		11/29/18	Junction Boxes and Pipe Run at 2-9A	Project team	OTH	\$ 184,000	\$ 184,000	7/25/19	9/3/19
003	007		8/26/19	Temporary barriers at Site 2-1A and 2-5B	Project team	CRQ	\$ 75,422	\$ 75,422	8/27/19	9/25/19
004	010			Deletion of Optional Facilities	Project team / HGS	RRQ	\$ (1,089,161)	\$ (1,089,161)	1/3/20	1/22/20
005	011		1/20/20	Fence at Site 2-3	Project team / HGS	RRQ	\$ 20,589	\$ 20,589	1/22/20	2/10/20
006	008		1/27/20	Adjustment to Structure 1101-10 Elevation Issue at Site 2-10D	Project team / HGS	CRQ	\$ 39,984	\$ 39,984	2/25/20	3/10/20
007	009		1/29/20	Fence Deletion; Removal/Reinstallation of Fence at Site #2-9A	Project team	RRQ	\$ (49,687)	\$ (49,687)		3/5/20
008	012		2/10/20	34.5kV Ductbank at Site 2-7C-4 (Design)		CRQ	\$ 26,723	\$ 26,723	2/27/20	3/10/20
009	014		4/7/20	34.5kV Ductbank at Site 2-7C-4 (Construction)	Project team / HGS	CRQ	\$ (709,334)	\$ (709,334)	4/10/20	4/23/20
010	013		4/15/20	Guardrail at Site 2-1A	Project team / HGS	CRQ	\$ 14,484	\$ 14,484	4/21/20	

Change Type Legend:

BET= Betterment

CRQ= Contract Requirements

DDL= Design Development

OTH= Other

PAC= Partner Agency Change

RRQ= Revised Requirements

Total Approved through March 2020:	\$ (792,130)	\$ (792,130)
Total Approved in April 2020:	\$ (709,334)	\$ (709,334)
Total Approved through April 30, 2020:	\$ (1,501,464)	\$ (1,501,464)
Total in Process in April 2020:	\$ 14,484	\$ 14,484
Total:	\$ (1,486,980)	\$ (1,486,980)
Total Original Federal Baseline Budget:	\$ 26,586,161	\$ 26,586,161
Approved Changes through April 30, 2020:	-5.65%	-5.65%
Approved Changes in April 2020:	\$ (709,334)	\$ (709,334)
Changes in April 2020:	-2.67%	-2.67%

DIRECTIVE LETTERS

Table 33 shows the directive letter (DL) log for Package A, showing changes that have been authorized in the work prior to agreement on scope, price, and/or schedule. As of April 2020, 300 DLs were issued for Package A, 249 DLs were closed by approved change orders, and 51 DLs remain open.

Table 33 - Package A Directive Letter Log, April 2020

DL #	DATE	DESCRIPTION	SOURCE ORGANIZATION	CHANGE TYPE	AMOUNT	RFC #	CO #	COCO#	DL Status
014	9/16/14	TPSS Reconfiguration for Vehicular Access and Grating	WMATA	DDL	\$ -	0067	363		Open
029	10/17/14	Delete remaining design and engineering for 9 BMPs removed from the Project's stormwater management (SWM) design.	Project team	RRQ	\$ (416,070)	0085			Open
062	5/29/15	Increased Ground Grid Size at Wayside Facilities (Criteria Change)	WMATA	RRQ	\$ 20,000	0145			Open
078	7/9/15	Voice Over Internet Protocol Telephone in Yard Storage Rooms At Secondary Entrance Pavilions	WMATA	PAC	\$ 148,000				Open
080	7/30/15	Relocation of Fire Command Centers to Yard Storage Rooms at Selected Pavilions	Project team	RRQ	\$ -	0160			Open
089	9/22/15	Engineering Recommendations from Storm Pipe Video Analysis	Project team	CRQ	\$ -	0541	372		Open
095	10/30/15	Increased Ground Grid Size at Wayside Facilities (Criteria Change)	WMATA	RRQ	\$ -	0145			Open
103	12/23/15	West Segment SWM Facilities	Project team	RRQ	\$ 38,500	0221			Open
131	5/3/16	N08 Herndon Station Automatic Operation	Project team	OTH	\$ (285,000)	0299			Open
134	5/26/16	PSI Trailer Modification for Laydown 10 Site	Project team	OTH	\$ 26,000	0282	228		Open
151	7/29/16	Installation of LED Lights in lieu of Fluorescent Lights for Handrails	WMATA	RRQ	\$ 544,000				Open
158	8/31/16	West Segment SWM Facilities	Project team	RRQ	\$ (38,500)	0221			Open
160	9/7/16	Emergency Trip Stations (ETS) Power Cable Changes in Size and Quantity	WMATA	DDL	\$ -	0220			Open
164	9/15/16	Additional Station Signs Identified in Phase 1 to be added to Phase 2	WMATA	DDL	\$ 200,000	0209	170		Open
187	10/20/16	Emerging Change for Fire Flow/FDC at Pavilions	CRC	RRQ	\$ -				Open
223	11/10/16	Fire Department Connection Requirements at Dulles Airport Station	CRC	RRQ	\$ -	0484			Open
232	2/13/17	DVP Self Performed Work	CRC	CRQ	\$ -				Open
236	3/8/17	Wayside Roof Edge Modification	CRC	DDL	\$ -	0425			Open
237	3/9/17	DVP Dulles Substation Tie In - 34.5kV Feeder #317	Project team	OTH	\$ -	0295			Open
240	5/3/17	CRC's Environmental Staffing	CRC		\$ -				Open
243	6/13/17	Coordination and Quality Control of Fiber Installation at Dulles Pedestrian Tunnel	Project team	DDL	\$ 134,000				Open
259	2/2/18	Restoring Ashburn South Dirt Haul Road to Original Condition	Loudoun County	DDL	\$ 28,000	0480			Open
265	4/24/18	Asphalt Repairs to Ramp G and Right Shoulder of Eastbound DIAAH	CRC		\$ -				Open
292	7/30/18	Omitted Work at Ashburn South Kiss & Ride Lot	Loudoun County	PAC	\$ (20,000)	0465	332		Open
301	11/27/18	Intrusion Detection and Warning Cable Relocation	Project team	RRQ	\$ -	0521			Open
303	12/11/18	DVP Self Performed Work	CRC	CRQ	\$ -				Open
305	1/9/19	Add Platform Exit Signs at Dulles Station	WMATA	RRQ	\$ -	0539			Open
306	1/15/19	Impacts to CRC from Battery Failure During Testing at Herndon Station	WMATA	OTH	\$ -	0469	332		Open
308	2/1/19	Impacts to CRC from Battery Failure During Testing at Herndon Station	WMATA	OTH	\$ 14,000	0469	332		Open
309	2/5/19	Safe Braking Test Requirements	Project team	PAC	\$ -	0507			Open
313	3/12/19	Engineering Recommendations from Storm Pipe Video Analysis	Project team	CRQ	\$ 265,059	0541	372		Open
314	3/15/19	Safe Braking Test Requirements	Project team	PAC	\$ -	0507			Open
316	5/1/19	CRC to provide updates to Submittal for the Master Testing and Commissioning Plan	Project team	DDL	\$ -				Open
318	5/1/19	Credit for Deletion of Grounding Cable	Project team / CRC	DDL	\$ (982,518)				Open

Table 33 - Package A Directive Letter Log, April 2020, Cont'd.

DL #	DATE	DESCRIPTION	SOURCE ORGANIZATION	CHANGE TYPE	AMOUNT	RFC #	CO #	COCO#	DL Status
323	6/14/19	Scheduled Installation of Art-in-Transit at Innovation Center Station after substantial completion	CRC	CRQ	\$ -	0512	347		Open
325	7/19/19	WMATA Request for Additional Contracting Vendor Information	Project team / CRC	OTH	\$ 5,000				Open
326	7/19/19	Provision of Lock Cylinders at all Access Panels in Public Areas of Phase 2 Stations	WMATA		\$ 6,000	0548			Open
330	8/14/19	Perform Services for Package G Contractor at Dulles Station Screenwall	CRC	DDL	\$ -	0535			Open
331	8/16/19	Installation of Intrusion Alarm Signal Pathway at Loudoun Gateway Pavilion	CRC	OTH	\$ 23,000	0529			Open
332	9/11/19	Perform Services for Package G Contractor at Dulles Station Screenwall	CRC	DDL	\$ 21,000	0535			Open
333	11/27/19	Elevator Repairs at Loudoun Gateway Pavilion-Downspout.	Project team / CRC	OTH	\$ 16,000	0544	373		Open
334	1/22/20	LAN/WAN and VOIP System Testing	CRC	PAC	\$ -				Open
335	1/23/20	Roadway Signage	CRC	OTH	\$ -				Open
336	2/10/20	Conduit Covers	Project team / CRC		\$ -				Open
338	2/21/20	Required Software Changes for the N06 Wiehle Avenue Tie-In	Project team	DDL	\$ -				Open
339	3/2/20	Roadway Signage	CRC	OTHER	\$ 63,000				Open
340	3/4/20	Rejected Code Inspection at Dulles Station - ETS Conduit and Cable	CRC	PAC	\$ -				Open
341	3/5/20	N06 Tie-In- WMATA Required Software Design and Analysis Support	WMATA	PAC	\$ -				Open
342	3/6/20	ALSTOM's Independent Review of N06 Tie-In Software Documentation prepared by CRC and its Subcontractors	WMATA	PAC	\$ 170,000				Open
343	3/6/20	Simulation and Regression Testing for N06 Tie-In Software to be Performed by Alstom - Construction Change	WMATA	PAC	\$ 360,000				Open
344	4/16/20	Recommended Spare Parts and Special Tools List	Project team / CRC	CRQ	\$ 14,320	0518		020	Open
Subtotal Directive Letter - Open					\$ 353,791				
Subtotal Directive Letter - Closed					\$ 91,925,043				
Total Directive Letter					\$ 92,278,834				

Change Type Legend:

BET= Betterment
 CRQ= Contract Requirements
 DDL= Design Development
 OTH= Other
 PAC= Partner Agency Change
 RRQ= Revised Requirements

Table 34 shows the DL log for Package B. Through April 2020, 130 DLs have been issued for Package B, 92 DLs have been closed completely by approved change orders, and 38 DLs remain open.

Table 34 - Package B Directive Letter Log, April 2020

DL #	DATE	DESCRIPTION	SOURCE ORGANIZATION	CHANGE TYPE	AMOUNT	RFC #	CO #	DL Status
001	3/24/15	Maintenance of Way Building (MWB) Shop Space Modifications (Group 1 Changes)	WMATA	RRQ	\$ 50,000			Open
025	3/3/16	Hardware Standardization with Phase 1	Project team	RRQ	\$ -	134		Open
030	3/15/16	Special Inspections	Project team / HP	RRQ	\$ -	048		Open
058	5/1/17	Natural Gas Distribution	HP	CRQ	\$ -	083	120	Open
062	7/31/17	Electric Fire Pump	Project team / HP	RRQ	\$ -	148		Open
064	8/17/17	Hoist Pit Floor Slope	Project team	RRQ	\$ -			Open
068	9/25/17	Spray Fireproofing Material	Project team	RRQ	\$ -			Open
070	10/5/17	Turntable Safety Signs	WMATA	RRQ	\$ -	123		Open
072	10/12/17	Deletion of Elevated Platforms at SIB Blow Pits	WMATA	RRQ	\$ -	147		Open
075	12/22/17	Gatehouse Delegated Design	HP	RRQ	\$ -			Open
086	6/14/18	Additional Fence Grounding - WMATA Safety & Security	HP	RRQ	\$ -			Open
088	7/12/18	Installation of Oil-water Separators and Drainage for the Transformer Yards at TPSS #21 and TPSS #21A	Project team	RRQ	\$ -			Open
092	9/24/18	Rock at Off-Site Sanitary Installation	HP	CRQ	\$ 800,000	106		Open
102	12/13/18	TWF - Low Smoke Zero Halogen Power Cables	Project team	RRQ	\$ -		124	Open
103	3/4/19	Oil Water Separator at the Fuel Center	Project team / HP	RRQ	\$ -			Open
106	3/22/19	Ladder Rungs	Project team / HP	RRQ	\$ -	150		Open
107	4/3/19	Mercure Circle Paving - Base Scope Credit	Project team	RRQ	\$ (362,000)			Open
108	4/3/19	Protection of Wheel and Axle Control Panel	Project team	RRQ	\$ 8,000	144		Open
109	4/10/19	Schedule Recovery - Global Time Extension Post June 1, 2016	Project team	RRQ	\$ -		119	Open
111	6/19/19	Hardware Standardization with Phase 1	Project team	RRQ	\$ 31,900	134		Open
113	6/26/19	Maintenance of Way Building (MWB) Renegade Parts Washer Relocation	WMATA	RRQ	\$ 21,000	169	123	Open
114	8/8/19	SCADA Mapping in Yard Servers	WMATA	RRQ	\$ 21,000	164	121	Open
115	8/28/19	ARS/Integration - Exhibit A	Project team / HP	RRQ	\$ -			Open
116	10/16/19	Steel Covers on Transition Boxes in Yard	HP	RRQ	\$ 38,000			Open
117	11/12/19	Third Party Fire Alarm Testing	HP		\$ -			Open
118	12/30/19	Fire Alarm Dialers	WMATA	RRQ	\$ 22,000	167	122	Open
119	1/16/20	Track Switch Obstruction	HP	RRQ	\$ -	175		Open
120	1/15/20	SD Memory Cards and Configuration of CCTV Cameras	WMATA	RRQ	\$ 33,000	172		Open
121	1/28/20	Access Control Configuration - Background Checks	WMATA	RRQ	\$ 1,000			Open
122	2/5/20	Removal of Link - Automated Energy Management System (AEMS) & System Performance Demonstration (SPD)	Project team	RRQ	\$ -	170		Open

Table 34 - Package B Directive Letter Log, April 2020, Cont'd

DL #	DATE	DESCRIPTION	SOURCE ORGANIZATION	CHANGE TYPE	AMOUNT	RFC #	CO #	DL Status
123	2/11/20	Specialty Signage	WMATA	RRQ	\$ 16,000	173		Open
124	2/11/20	Evacuation Signage - Type 12	WMATA	RRQ	\$ 2,000			Open
125	3/5/20	Spare Parts and Special Tools List	HP	RRQ	\$ 1,907,080	155		Open
126	3/13/20	Insulated Joints		RRQ	\$ -			Open
127	3/13/20	Ballast		RRQ	\$ -			Open
128	3/13/20	Surge Arresters		RRQ	\$ -			Open
128.1	4/22/20	Surge Arresters		RRQ	\$ 113,000			Open
129	4/30/20	Vital Relays - Testing and Inspection	HP		\$ -			Open
Subtotal Directive Letter - Open					\$ 2,701,980			
Subtotal Directive Letter - Closed					\$ 7,508,200			
Total Directive Letter					\$ 10,210,180			

Change Type Legend:

BET= Betterment
 CRQ= Contract Requirements
 DDL= Design Development
 OTH= Other
 PAC= Partner Agency Change
 RRQ= Revised Requirements

COST CONTINGENCY MANAGEMENT

The Project scope and hence designated cost contingency is divided into ten contingency phases. The table, milestones and allotments established for each contingency phase set forth the planned finish dates of the allotments to be used to fund Project needs including approved change orders, directive letters and estimates at completion that exceed the budgeted amounts. The Contingency Phase Milestone table was updated in April 2014, as part of the RCMP, Revision 1d. The RCMP, Revision 1d, was resubmitted on June 20, 2014, for FTA's review and approval. The resubmitted RCMP included FTA requested changes to Procedure P2M 5.07 Rev.01 in which the Airports Authority committed to seek funding for any requested CNPAs and betterments prior to their implementation. The Contingency Phase Milestones were revised in June 2019 to split Phase 9 into 9A and 9 since the finish dates of two activities are delayed and are expected to finish approximately one quarter apart. This revision was included in the RCMP 4.0, approved by the FTA in September 2019, and is reflected in Table 35 - Contingency Allocation Summary.

The milestone to achieve contingency Phase 9A - "Package B - Yard Buildings, Systems Complete" and Phase 9 - "Package A - Systems Complete, Start Testing" were met on January 31, 2020. With the achievement of these milestones, the Project advanced to Contingency Phase 10 "Project Substantial Completion; WMATA Operations Readiness Date" allowing the use of Phase 10 allotted amount of \$43.5 million. Table 35 - Contingency Allocation Summary was modified to reflect this change.

Table 35 - Contingency Allocation Summary, April 2020

PHASE #	PROGRAM MILESTONES	ACTUAL FINISH	PHASE AUTHORIZATION	CONTINGENCY RESERVE	CONTRIBUTION/BASELINE ADJ	ALLOCATED	REMAINING
1	Pkg A - Issue Design-Build Contract NTP	7/8/2013	\$ -				\$ -
2	Pkg B - Issue Design-Build Contract NTP	8/18/2014	\$ 39,290,770		\$ 9,841,233	\$ 15,977,718	\$ 33,154,285
2R	Contingency Reserve from Phase 2			\$ 33,154,285		\$ 33,154,285	\$ -
3	Pkg A - Final Design and Early Work Packages Complete	4/30/2016	\$ 40,267,833			\$ 36,625,899	\$ 3,641,934
3R	Contingency Reserve from Phase 3			\$ 3,641,934		\$ 3,641,934	\$ -
4	Pkg A - Elev. Guideway Columns, Caps Complete Pkg B - Building Design Complete and Accepted	2/28/2017	\$ 41,535,764			\$ 28,684,874	\$ 12,850,890
4R	Contingency Reserve from Phase 4			\$ 12,850,890		\$ 12,850,890	\$ -
5A	Pkg A - Fund 13 month schedule extension		\$ 50,000,000			\$ 50,000,000	\$ -
5	Pkg A - Utility Relocation Complete Pkg B - Site and Civil Work Complete	11/30/2018	\$ 41,000,000		\$ (6,586,584)	\$ 34,413,416	\$ -
7	Pkg A - Elevated Guideway Erection Complete	8/28/2017	\$ 39,000,000			\$ -	\$ 39,000,000
7R	Contingency Reserve from Phase 7			\$ 39,000,000	\$ (19,999,577)	\$ 19,000,423	\$ -
6	Pkg A - Complete Energizing of Permanent Power	7/1/2018	\$ 39,000,000			\$ -	\$ 39,000,000
6R	Contingency Reserve from Phase 6			\$ 39,000,000	\$ (6,966,000)	\$ 32,034,000	\$ -
8	Pkg A - Traction Power Substations Complete	7/1/2019	\$ 39,000,000			\$ 7,285,938	\$ 31,714,062
8R	Contingency Reserve from Phase 8			\$ 31,714,062		\$ 31,714,062	\$ -
9A	Pkg B - Yard Buildings, Systems Complete	1/31/2020	\$ 20,000,000			\$ 9,548,723	\$ 10,451,277
9AR	Contingency Reserve from Phase 9A			\$ 10,451,277		\$ 6,452,219	\$ 3,999,058
9	Pkg A - Systems Complete, Start Testing	1/31/2020	\$ 39,000,000				\$ 39,000,000
10	Project Substantial Completion; WMATA Operations Readiness Date		\$ 43,500,000				\$ 43,500,000
11	Revenue Service Date		\$ 48,285,882				\$ 48,285,882
PC	Project Closeout		\$ 71,570,930				\$ 71,570,930
TOTAL			\$ 551,451,179		\$ (23,710,928)	\$ 321,384,381	\$ 206,355,870

Total amount for "Remaining" does not include the grayed line items.

Table 36 is a log of all the Contingency Drawdown Requests (CDRs) processed through *April 2020* on all Packages. A contribution column added to the table to reflect the contribution of \$9.8 million to contingency as a result of the under-run in Package S and overrun in Package B is amended, in August 2018, to include the Baseline Adjustment to reflect the Package G and Package P funding to establish the Baseline Budgets for these new packages. The contingency allocated is in alignment with the RCMP contingency drawdown plan.

Table 36 - Contingency Draw Down Request Log, April 2020

CDR #	PKG	CO #	DL #	DESCRIPTION	CHANGE TYPE	CONTRIBUTION/ BASELINE ADJ	TOTAL ALLOCATED	POSTING		CONT. PHASE
								YEAR	MO	
Subtotal Changes Phase 2						\$ 9,841,233	\$ 15,977,718			
Subtotal Changes Phase 2R						\$ -	\$ 33,154,285			
Subtotal Changes Phase 3						\$ -	\$ 36,625,899			
Subtotal Changes Phase 3R						\$ -	\$ 3,641,934			
Subtotal Changes Phase 4						\$ -	\$ 28,684,874			
Subtotal Changes Phase 4R						\$ -	\$ 12,850,890			
Subtotal Changes Phase 5A						\$ -	\$ 50,000,000			
Subtotal Changes Phase 5						\$ (6,586,584)	\$ 34,413,416			
Subtotal Changes Phase 7R						\$ (19,999,577)	\$ 19,000,423			
Subtotal Changes Phase 6R						\$ (6,966,000)	\$ 32,034,000			
Subtotal Changes Phase 8						\$ -	\$ 7,285,938			
Subtotal Changes Phase 8R						\$ -	\$ 31,714,062			
Subtotal Changes Phase 9A						\$ -	\$ 9,548,723			
816	B		123	Site Identification Signage	RRQ		\$ 16,000	2020	02	9AR
817	B		124	Building Sign No.12 - Evacuation Signage	RRQ		\$ 2,000	2020	02	9AR
818	B		125	Spare Parts and Special Tools	RRQ		\$ 1,907,080	2020	02	9AR
820	B	121	114	Supervisory Control and Data Acquisition (SCADA) Mapping in Yard Servers	RRQ		\$ 35,000	2020	02	9AR
822	A	COCO-025	328	Additional Quantity of Emergency Trip Station (ETS) Power Removal Maps - Design and Construction Change	OTH		\$ 38,000	2020	02	9AR
823	A		339	Roadway Signage	OTH		\$ 63,000	2020	02	9AR
824	P	006		Adjustment to Structure 1101-10 at Site 2-10D	CRQ		\$ 39,984	2020	02	9AR
825	P	007		Fence at Site 2-9A	RRQ		\$ (49,687)	2020	02	9AR
826	A	340	081, 226, 261	Modification of Wiehle Avenue Train Control Room	DDL		\$ 1,281,666	2020	02	9AR
827	P	008		34.5kV Ductbank at Site 2-7C-4	CRQ		\$ 26,723	2020	03	9AR
828	A	357	294	Construction Changes at Reston Town Center, Innovation Center, and Herndon Stations due to Revised Design for Maintenance Responsibilities	PAC		\$ 322,600	2020	02	9AR
829	A	370		DSC Unsuitable Material at Innovation North Soundwall Footing	CRQ		\$ 176,000	2020	02	9AR
830	A	339		Bundled changes: 1)Loudoun County - Pavilion Area Parking Marking and Signing Refinements; 2)OSHA's amended Silica Dust Exposure Regulation	DDL /RRQ		\$ 1,005,000	2020	03	9AR
834	A	369	159	Lighting Specifications, Schedule, and Calculation Refinements for Fixture Additions - Design	OTH		\$ 148,800	2020	03	9AR
835	A	372	089, 313	Engineering Recommendations for Pipe Video Analysis - Construction	CRQ		\$ (94,059)	2020	03	9AR
836	A	373	333	Elevator Repairs at Loudoun Gateway Pavilion due to Water Intrusion - Construction	OTH		\$ 8,000	2020	03	9AR
837	A	371		Engineering Recommendations for Pipe Repairs - Re-Video and EOR Analysis	OTH		\$ 6,900	2020	03	9AR
838	A	356	310	Change in Maintenance Responsibilities at Loudoun County Station	PAC		\$ 205,000	2020	03	9AR
840	P	009		34.5kV Ductbank at Site 2-7C-4 (Construction)	CRQ		\$ (709,334)	2020	04	9AR
842	B		128	Replacement of Surge Arresters	RRQ		\$ 113,000	2020	04	9AR
843	P	010		Guardrail at Site 2-1A	CRQ		\$ 14,484	2020	04	9AR

Table 36 - Contingency Draw Down Request Log, April 2020, Cont'd

CDR #	PKG	CO #	DL #	DESCRIPTION	CHANGE TYPE	CONTRIBUTION/ BASELINE ADJ	TOTAL ALLOCATED	POSTING		CONT. PHASE
								YEAR	MO	
844	A	375	253	UL Listing for fire alarm conduit at Stations and Wayside Facilities	RRQ		\$ 414,100	2020	04	9AR
846	G	002		Descope Waterproofing and Flashing	RRQ		\$ (16,038)	2020	04	9AR
847	A	376	275	Utility Relocation Changes at Reston South - Sunrise Valley Drive and Edmund Halley Drive	CRQ		\$ 1,498,000	2020	04	9AR
Subtotal Changes Phase 9AR						\$ -	\$ 6,452,219			
Total Contingency						\$ (23,710,928)	\$ 321,384,381			
Net Allocation							\$ 345,095,309			
Remaining Contingency from All Phases							\$ 206,355,870			
Original Contingency for All Phases							\$ 551,451,179			

No CNPAs in April 2020.

Contribution of \$9.8 million to contingency is a net of the under-run in Package S and overrun in Package B.

Baseline adjustment includes \$33.6 million decrease to Original Contingency budget to fund Packages G and P.

Change Category Legend:

BET= Betterment

CRQ= Contract Requirements

DDL= Design Development

OTH= Other

PAC= Partner Agency Change

RRQ= Revised Requirements

Table 37 summarizes the contingency funds allocated across all Packages by FTA SCC codes. The total contingency allocated through April 2020 includes \$253,585,028 for Package A, \$500,017 for Package S, \$49,538,202 for Package B, \$43,803,901 for Airports Authority Services, the saving of \$24,565,599 for WMATA, \$9,812 for Package G, the saving of \$1,486,980 for Package P, a contribution of \$9.8 million, which is a net of the under-run in Package S and the overrun in Package B, and Baseline Adjustment to reflect the Package G and Package P funding to establish Baseline Budgets for the new packages.

Table 37 - Project Contingency Summary by SCC Code, April 2020

FTA SCC CODE	DESCRIPTION	Package A (Main Line)	Package S (Yard Site Prep)	Package B (Yard)	WMATA Agreement	Airports Authority Services	Package G (Windscreens)	Package P (SWM Ponds)	CONTINGENCY TO DATE
10	Guideway and Track Elements	\$ 8,433,234							\$ 8,433,234
20	Stations	\$ 27,884,156					\$ 9,812		\$ 27,893,968
30	Yards, Shops, Administration Buildings	\$ -	\$ 497,500	\$ 26,323,812					\$ 26,821,312
40	Site Work and Utility Relocation	\$ 162,244,505	\$ 2,517	\$ 17,925,175		\$ 2,691,695		\$ (1,524,703)	\$ 181,339,189
50	Systems	\$ 27,897,487							\$ 27,897,487
60	Right of Way Acquisition	\$ -							\$ -
70	Vehicles	\$ -			\$ (24,565,599)				\$ (24,565,599)
80	Professional Services	\$ 27,125,646		\$ 5,289,215		\$41,112,206		\$ 37,723	\$ 73,564,790
	SUBTOTAL	\$ 253,585,028	\$ 500,017	\$ 49,538,202	\$ (24,565,599)	\$43,803,901	\$ 9,812	\$ (1,486,980)	\$ 321,384,381
	CONTRIBUTION/ BASELINE ADJ		\$ 14,049,703	\$ (4,208,470)			\$ (6,966,000)	\$ (26,586,161)	\$ (23,710,928)
	NET ALLOCATION	\$ 253,585,028	\$ (13,549,686)	\$ 53,746,672	\$ (24,565,599)	\$43,803,901	\$ 6,975,812	\$ 25,099,181	\$ 345,095,309

7. PROJECT SCHEDULE

The Airports Authority is monitoring the current outbreak of Covid-19 coronavirus. As Project partners, contractors and subcontractors deal with the implications of the pandemic, some schedule impacts can be expected. Although it is impossible to gauge the exact nature and magnitude of these impacts, the Airports Authority will continue to observe the situation and respond to these changes as required.

OVERALL PROJECT SCHEDULE

The Project Master Schedule has been developed to highlight key activities, milestones, interfaces and dependencies amongst Package A, Package B, Package G, Package P, WMATA, and Parking Garages works for both Fairfax County and Loudoun County. The Project Master Schedule is updated and distributed monthly to all stakeholders. It highlights the causes and effects of any potential delays and allows stakeholders to coordinate and implement recovery plans to best address time-related issues.

The contractual SSCD for Package A is August 7, 2019, and December 23, 2018 for Package B. For planning purposes, it has been assumed that WMATA Dynamic Testing will be completed within 60 days following SSCD of Package A. However, WMATA will determine the scope and schedule of its testing program following substantial completion. The Airports Authority performed a schedule risk analysis and incorporated the results in the Risk and Contingency Management Plan (RCMP), Revision 4.0 in May 2019. The risk-adjusted substantial completion date was forecasted to be April 17, 2020, and the risk-adjusted Revenue Service Date was forecasted to be July 16, 2020. These dates are not achievable due to the delay events that occurred late in 2019 and are ongoing. The Airports Authority continues working with various Package contractors to mitigate schedule risks to achieve the earliest possible Project completion date.

PACKAGE A

The revised baseline schedule was “Accepted as Noted” on May 12, 2015. CRC is required to use this revised baseline schedule for monthly updates.

CRC’s March 2020 monthly schedule update was “Not Accepted”. The schedule update had issues with *violations of the contract schedule specification, logical errors, lack of progress in static and dynamic testing, failure to account for time-consuming ATC software issues impacting static testing, unrealistic dynamic testing schedules, missing critical delay events regarding the Interlocking Plant Test, improper activity cost loading, and other technical issues.*

CRC’s April 2020 monthly schedule update was received on May 7, 2020. This schedule is under review. The Package A April 2020 schedule update forecasts substantial completion by May 11, 2021. This schedule impact is primarily due to the time required to develop and implement a path to validate and verify CRC’s Automatic Train Control (ATC) software and integrate the N06 Wiehle Avenue TCR with Phase 1. *The Airports Authority and WMATA are discussing ways to expedite systems integration given WMATA’s decision to shut down passenger operations on Phase 1 of the Silver Line from May 24, 2020 to September 7, 2020, in order to perform station maintenance.*

The forecasted milestone dates are shown in Table 38.

Table 38 - Package A Schedule Milestones

MILESTONES	REVISED BASELINE SCHEDULE UPDATE	CRC's UNAPPROVED APRIL 2020 SCHEDULE
Complete Design	December 2015	<i>August 2020*</i>
Complete Elevated Guideway Construction	April 2017	November 2018 (A)
Complete At-Grade Guideway Construction	August 2017	July 2018 (A)
Complete Trackway	April 2018	June 2019 (A)
Complete Station Build-out	November 2018	<i>June 2020</i>
Complete System Installation	September 2018	January 2021
Package A Substantial Completion	August 2019	<i>May 2021**</i>
Operational Readiness Date (ORD)	October 2019	TBD

(A) – Actual

*Includes Change Orders

** CRC's *April 2020* Schedule is under review

The Airports Authority had been working with CRC to mitigate delays and achieve the risk-adjusted substantial completion date of April 17, 2020 and the risk-adjusted revenue service date of July 16, 2020, as discussed in the RCMP 4.0, submitted in June 2019. However, these dates are not feasible due to the hardware and software integration and testing requirements associated with Phase 1 Tie-In at the Wiehle Avenue Station. The Airports Authority has provided direction to CRC to complete necessary software documentation to contractual standards, and has provided direction and funding for ALSTOM (WMATA's preferred systems integrator) to review CRC's software documentation, and for ALSTOM to prepare and perform simulations to validate and verify CRC's ATC software and provide a report of findings to the Airports Authority and WMATA. However, ALSTOM has chosen not to participate in this effort. The "shelter-in-place requirements" due to the COVID-19 pandemic also constitute a schedule risk.

In April 2020, WMATA announced shutdown of passenger operations on Phase 1 of the Silver Line from May 24, 2020 to September 7, 2020, for station maintenance. This provides an opportunity for a continuous process of system integration, rather than during weekend outages. This plan was not incorporated into CRC's April 2020 schedule update, pending agreement between the Airports Authority and WMATA, and direction to CRC.

- Schedule Performance (as of *April 2020* schedule update with data date of *May 1, 2020*.)
 - Scheduled Substantial Completion Date (SSCD) - The contractor's current forecasted SSCD is *May 11, 2021*, a delay of 643 calendar days from the contract substantial completion date of August 7, 2019. This forecast represents a loss of 21 calendar days since the *March 2020* Schedule update. This schedule loss is due to ALSTOM's refusal to participate in the effort, and additional time to develop and implement a path for ATC software validation and verification. *Incorporation of a new plan to complete systems integration during the Silver Line Phase 1*

shutdown between May 24, 2020 and September 7, 2020 is pending agreement. See “Longest and Near-Longest Paths”, below.

- Longest and Near-Longest Paths
 - The longest path as shown in CRC’s *April 2020* update runs through the tie-in at Wiehle Avenue Station and included activities previously envisioned to be completed by ALSTOM. It also includes a parallel activity, about five months in duration, to devise and implement an alternative plan. This parallel activity is required to offset Alstom's refusal to participate in the ATC software validation and verification process. The actual duration will depend on the nature and scope of the plan to be devised by Airports Authority and WMATA, and the access schedule to the N06 Wiehle Avenue Station TCR.

The total float of this path is negative 643 calendar days.

- According to CRC, the secondary longest path as shown in the *April 2020* update runs through *the Airports Authority’s direction to CRC to design, fabricate, and install Fiber Reinforced Polymer (FRP) tub platforms at N07, N08, N09, N11, and N12 stations; CRC’s submittal of punchlist, substantial completion inspections, correction and re-inspection of deficiencies, the Airports Authority’s final substantial completion inspection, correction of deficiencies, and substantial completion.*

The total float of this path is negative 537 calendar days.

➤ Earned Value (as of *April 2020*)

The contractor’s pay application shows that the contract sum to date is \$1,438,735,842, including changes. The current earned value invoiced by the contractor is \$1,423,058,321, or about 98.9%. The contractor shows earnings of \$230,000 during *April 2020*, or approximately 0.02% of the total value of the contract sum to date. Currently these earnings are under review.

PACKAGE B

The *March 2020* monthly schedule update was “Not Accepted”. The Project team has noted the following issues:

- Continued lack of accuracy in updating remaining durations of HP controlled work.
- Lack of accuracy for the testing and commissioning portion of the schedule compared to the information provided by HP’s onsite team.

The *April 2020* monthly schedule update was received on *May 13, 2020*, and is under review.

Table 39 shows the key milestone dates as identified in the Baseline Schedule and the current updates.

Table 39 - Package B Schedule Milestones

MILESTONES	REVISED BASELINE DATE	HP's UNAPPROVED APRIL 2020 SCHEDULE
Yard Structures Certificates of Occupancies Permits Issuance (including TCRs and TPSSs) Complete	January 2018	<i>May 2020</i>
Start of Yard Trackwork (including civil)	May 2016	January 2017 (A)
Completion of Yard Trackwork Installation	July 2017	August 2019 (A)
Completion of roadwork	June 2017	<i>May 2020</i>
Completion of the Yard Integration Testing	March 2018	May 2020
Substantial Completion	December 2018*	<i>January 2021**</i>

(A) – Actual

*The SSCD has been revised to reflect the current contractual SSCD, although HP has not submitted a Revised Baseline schedule.

** HP's April 2020 Schedule Update is under review.

HP submitted a revised recovery schedule on October 7, 2019, but has rescinded its submittal due to commercial issues.

The Airports Authority continues to meet with HP representatives to discuss schedule issues, and respond to schedule updates. Chronic issues are addressed with HP's senior management as required.

➤ **Schedule Performance**

- **Scheduled Substantial Completion Date (SSCD)** - The contractor's current forecasted SSCD is *January 18, 2021*, a delay of 758 calendar days from the contract substantial completion date of December 23, 2018. This forecast has *slipped 84* calendar days since the forecast in *March 2020*. See "Longest and Near-Longest Paths" below.
- **Longest and Near-Longest Paths**
 - The primary path progresses through *replacement of the surge arrestor at the Service and Inspection Building followed by Phase 2 dynamic testing*, followed by Systems Performance Demonstration (SPD), and substantial completion. The total float of this path is negative 758 calendar days.
 - The near-longest path progresses through security system testing at MWB, WHB, and TB, followed by issuance of certificates of occupancy of buildings and SPD. The total float of this path is negative 695 calendar days.

➤ **Earned Value and Schedule Analysis**

The contractor's pay application shows that the contract sum to date is \$297,945,592, including changes. The current earned value invoiced by the contractor is \$291,251,870, or 98%. The contractor earned \$641,681 during April 2020, or approximately 0.2% of the total value of the contract sum to date. Currently these earnings are under review.

PACKAGE G

The contract Scheduled Substantial Completion Date (SSCD) for Package G is August 11, 2020. Schlosser submitted the baseline schedule to the Airports Authority in November 2018, and it was “Accepted” in December 2018. The AHJ issued the construction permit in May 2019. The current forecast for completion is *November 30, 2020*.

PACKAGE P

The contractual Scheduled Substantial Completion Date (SSCD) is June 11, 2021, followed by two one-year site maintenance periods, with final completion on June 12, 2023. HGS submitted the baseline schedule to the Airports Authority in November 2018, and was “Accepted as Noted”. Design work is separated into three primary design packages, with a fourth package for one “optional” facility. The construction permits for Package P-1 and Package P-2 have been issued by the AHJ. Site clearing began in May 2019. The P-3 Permit Package was submitted to the AHJ for permit in November 2019, and the permit was issued in December 2019. Design and Groundwater monitoring for the optional facility was completed by November, 2019, and review of drawings and construction plans *was completed* in April 2020 *and was submitted for permit to the AHJ*. Construction continued on multiple sites, and is generally on schedule or earlier. The current forecast for substantial completion is March 10, 2021, followed by two one-year maintenance periods.

8. RISKS

RISK AND CONTINGENCY MANAGEMENT PLAN

The RCMP, Revision 0, was submitted to FTA for review and approval on December 18, 2012. Revision 1 of the RCMP addressing FTA comments was submitted on April 24, 2013. The Project team submitted RCMP, Revision 1c, to FTA in November 2013, incorporating and addressing all outstanding issues and comments. The FTA approved the RCMP, Revision 1c, on February 4, 2014. The updated RCMP, Revision 1d, was submitted for FTA’s review and approval on June 20, 2014.

A Risk Workshop was conducted on December 12, 2014, to re-evaluate the Phase 2 Risk Register. This included a collective reassessment of the ranking of the risk items by discipline managers and resulted in the addition of new risks. As a result of this collective re-assessment effort, the Project team compiled the following:

- Proposed Top Ten Risks for Q4 2014 for FTA approval
- Detail of proposed Top Ten Risks as of the end of December 2014
- Previous (RCMP 1d) Top Ten Risks proposed to be removed from the list
- List of Risk Workshop attendees
- Appendix C Risk Register - Proposed Update, version 1e.

This package was sent to FTA for review in February 2015. In March 2015, FTA provided its comments on the submitted proposed Risk Register and the Top Ten Risks List. Following discussions between the Project team and the FTA, the Project team incorporated FTA’s comments and, on October 30, 2015, transmitted the updated Risk Register with the Top Ten Risks list to FTA for formal approval. In April

2016, the Project team reevaluated the active risk events in the risk register and updated their status and rankings. An updated RCMP, the Risk Register, and Top Ten Risks list was submitted to FTA/PMOC in May 2016. RCMP, Revision 2.0 addressed FTA's comments and was submitted on August 11, 2016. FTA approved this submittal on December 2, 2016.

A risk workshop was conducted in November 2016 to update the Phase 2 Risk Register. As a result of this collective re-assessment effort, the updated Risk Register, Revision 2.01 was sent to the FTA on December 16, 2016. The submittal included the following:

- Summary List of Top Ten Risks (13 risk events) proposed as of November 2016
- Scope and Status of Proposed Top Ten Risks (13 risk events) as of the end of November 2016
- Proposed changes to the previous List of Top Ten Risks
- Appendix C Risk Register - Proposed Update (November 2016).

The risk register and top ten risk items were further updated in July 2017. The revised risk register was submitted in September 2017 for FTA/PMOC review.

The Project team, in coordination with FTA and the PMOC, conducted a risk workshop on October 16, 2017, to update the Risk Register and the top ten risks list. A second workshop was conducted on October 31, 2017 for cost (Beta Factor) and schedule (Monte Carlo) analyses. The updated Risk Register and the cost and schedule contingency analysis were incorporated into the revised Risk and Contingency Management Plan (RCMP) Revision 3.0 update and a draft was sent to the FTA in November 2017. FTA's comments were received in December 2017. RCMP Revision 3.0 was approved by the FTA in March 2018. Upon 90% overall Project progress, an internal risk workshop was conducted on January 10, 2019, to re-evaluate the risk register. This included a collective reassessment of the ranking of approximately 200 risk items by discipline managers which also resulted in the addition of new risks. As a result of this collective re-assessment effort, the following were compiled:

- Proposed Top Risks
- List of Risk Workshop attendees
- Appendix C Risk Register - Proposed Update.

The Project team met with FTA/PMOC on February 7, 2019, and reviewed the risk register and top risks for beta factors and remaining contingency. The summary schedules for Packages A and G and Package B were also discussed. It was concluded that at that time Monte Carlo analysis could not be conducted due to certain missing information. In May 2019, most of the required information on Packages A and B was obtained. In May 2019, the Monte Carlo analysis was conducted to complete the schedule risk assessment. The draft RCMP 4.0 was submitted to the FTA on May 29, 2019. The final version of RCMP 4.0, after incorporating all of FTA/PMOC comments, was submitted on June 27, 2019, and resubmitted on August 15, 2019 after incorporating further comments from the FTA. FTA approved the final version of RCMP 4.0 on September 18, 2019. Table 40 shows the top risks, the mitigation status updates are shown in red.

Table 40 –Top Risks List, (updates in red), through April 2020

Risk ID	Event Description	Primary Risk Mitigation	Risk Rating
80.03.P.292 Proposed NEW*	Owner management extended time due to Package A: 1) Replace special rail ties due to camber. 2) Delay start of ATC integration at N06. 3) Additional safe braking tests. Package B: Delay post June 2016	Airports Authority to manage the overall program budget including PMSS, WMATA, VDOT, etc. to minimize cost overruns. <i>1) CRC has been able to achieve cross level without replacing the ties. 2) WMATA has agreed to grant a single outage at N06. Prior to the start of that outage CRC must have an approved Hazard Analysis, Consolidation Report and Authorized Construction Site (ACS) document. CRC has prepared the Consolidation Report and Hazard Analysis and submitted them to WMATA. WMATA has returned comments which are under review by CRC. 3) Safe braking tests were performed between February and October 2019. A few tests cannot be performed because of insufficient track (end of line). Risk is realized. Airports Authority issued a Change to HP for a 101-day extension from June 1, 2016. HP proposed 108 days which was agreed. Change order and cost is being discussed with HP.</i>	40
80.08.P.296 Proposed NEW*	There is a delta between the number of safe braking tests that CRC propose to complete (18 in total) and the number that WMATA would accept (around 1500).	Airports Authority to continue the discussion with CRC and WMATA on the number of tests required. Based on the results of the first safe braking test WMATA may consider reducing the number of tests. CRC to consider two shifts for testing. <i>CRC completed the feasible tests required by contract except at the end of line and a few interfaces. Risk is realized.</i>	35
80.02.D.240	Package B claim for Design delays beyond June 1, 2016	<i>HP submitted cumulative impact claim in January 2020 which is under review. This includes Design delay costs beyond June 1, 2016. Airports Authority has determined the delay impact to the schedule beyond June 2016 and has included that in the assessment of the claim.</i> 1) Spot mitigation of issues as they arise. 2) Expediting owner reviews, negotiating acceleration, coordinating with management. 3) Airports Authority has notified that HP is responsible for some of the delay due to slow construction progress.	30
80.03.P.297 Proposed NEW*	HP has verbally informed MWAA of their intent to file a 'Delay and Disruption' Claim	Continue to document HP activities, particularly in their continuing need to rework to correct flawed installations, inability to produce timely designs and poor track performance. <i>HP has submitted a delay and cumulative impact claim in January 2020 which is currently under review. The Airports Authority has prepared white papers for each of the major claim issues and is reviewing the costs.</i>	20
80.08.P.294 Proposed NEW*	WMATA Safety (SAFE) is a Department that is separate and operates in autonomy from WMATA project office. It may require scope beyond contract.	The WMATA, MWAA and Package Contractors work together where possible to deal with and mitigate issues that might impact the project SSCD and maintain project safety. <i>The Project Safety/Security Certification group continues to work with WMATA SAFE to address their concerns.</i>	16
80.03.C.2	Request for Equitable Adjustment Part 2 (REA-2) (for changes included in CO-66 and for changes after CO-66 that have not been finalized) (Cumulative claims / Total Cost)	Project team will review details once the native schedule file is submitted. Project team is also looking at CRC's performance, progress delays and reworks to refute the claim. <i>CRC has not formally submitted their REA2 claim.</i>	15
10.C.293 Proposed NEW*	Excessive camber in special rail ties	Work with CRC and WMATA to establish acceptable plan to fix or replace the ties: 1) Identify ties that need to be fixed or replaced. 2) Have CRC submit new QA/QC plan for the ties. 3) Expedite replacement of ties. 4) Direct cost will be absorbed by CRC . <i>Re-tamping has been completed at Herndon, Horsepen and Broad Run . WMATA acceptance is on a case-by-case basis at each location. WMATA has accepted Horsepen. Removal of ties with excessive camber will be determined on a case-by-case basis depending on cross level acceptability. No ties have required replacement. CRC has achieved cross level without tie replacement. Ties may need to be replaced at the YL-1 Turnout.</i>	12
80.03.C.4	Litigation costs including owner management	1) Promote good faith approach amongst all parties. 2) Ensure timely and proactive resolution of the issues. 3) Collective agreement on clear "burden of proof" & accountability. 4) Minimize any further changes. 5) Early collective efforts of contract, project controls and legal team. <i>These mitigation measures are being employed.</i>	12
20.R.300 Proposed NEW*	Code compliance issues associated with Air Conditioning Equipment in elevator and escalator machine rooms	Work closely with CRC and AHJ on solution and code reviews. Consider reduction in equipment size or type; need for compliance with energy code; relocation/redesign of equipment. Focus efforts on stations by proposed turnover sequence. <i>Risk Realized and corrective action taken.</i>	12

* Proposed NEW item and Top Risk in RCMP 4.0 September 2019.

9. PROJECT DEVELOPMENT

REAL ESTATE ACQUISITION

The Airports Authority is responsible for Phase 2 real estate acquisition as in Phase 1, but the real estate agent is directly under contract to the Airports Authority. For Package A, CRC is responsible for utility relocation and property acquisitions outside of the parcels that the Airports Authority has identified as part of the PE plans. The Project team has identified the Project parcels and has broken them into priorities -1, 2A, and 2B, under the contract. As design evolves, parcels will be added if justified and prioritized appropriately, in coordination with CRC. For Package B, Hensel Phelps is responsible for preparation of the plans to identify property rights acquisition, which is limited to that required for a sanitary sewer easement (shown on one parcel in PE), and the Airports Authority is responsible for acquiring the rights. An updated Property Acquisition List was transmitted to the FTA in May 2016.

➤ Package A

The 57 parcels required for Package A have been acquired, and all identified acquisition activities for Package A are complete.

Table 41 - Package A Property Acquisition Status

Priority	Total Anticipated ¹	PIP ² Complete	Initial Appraisal Complete	Revised PIP/ Appraisal Pending	Offer Made	Revision in Process	Settlement Reached/ Condemnation Processed	Acquisition Complete
1	9	9	9	0	9	0	9	9
2A	28	28	28	0	28	0	28	28
2B	20	20	20	0	20	0	20	20
Total³	57	57	57	0	57	0	57	57

1. Total based on current understanding including changes due to VSMP criteria revisions.

2. PIP = Property Identification Plan

3. Does not include those parcels on which construction will be performed by permit/permission (TRIP II and Fairfax County). Acquisitions/conveyances will be based on as-built conditions and completed prior to Package A substantial completion.

➤ Package B

The two parcels required for acquisition for Package B are included in the Priority 2A total. All identified acquisition activities for Package B are complete.

Condemnation Case Status

➤ Package A

Ten parcels *were* acquired by eminent domain. Eminent domain activities for Parcels 207, 220/320, 269, 249, 349, 260, 360, 228 and 328 are complete, with settlements finalized. The Certificate of Take for Parcel 210 was filed in October 2018, and assigned to a VDOT fee attorney. In April 2020, eminent domain activities remained in progress for Parcel 210; *the scheduled trial was postponed from June 2020 to August 2020 due to the global pandemic.*

ENVIRONMENTAL PERMITTING AND COMPLIANCE

The Project team continued to monitor and facilitate environmental permitting and compliance for the Project, based upon the “Summary of Mitigation Measures” (Attachment A) from the Amended Record of Decision. The latest quarterly update of the “Summary of Mitigation Measures” (Attachment A), including updates to the status of the 2012 FTA Finding of No Significant Impact (FONSI) mitigation measures, was completed and submitted to FTA in *April 2020*. The regular coordination between the Project team and the Package A, B and P contractors for environmental compliance and permitting activities continued in *April 2020*. The “shelter-in-place” orders due to the Covid-19 pandemic precluded most planned *field* environmental inspections in *April 2020*.

➤ **Package A**

CRC and the Project team continued to meet bi-weekly, but had no field inspections of wetlands and Erosion and Sediment Controls (ESC) facilities in March 2020, due to COVID-19 social distancing requirements.

➤ **Package B**

Though the Project team determined that the Rail Yard site was sufficiently stabilized such that the nearby wetlands impacts could be closed, they cannot be closed until the biennial inspection expected in June 2020. There was no inspection of ESC & environmental conditions at the Rail Yard in *April 2020*, due to Covid-19 social distancing requirements.

➤ **Package P**

In June 2019, HGS began work on stormwater facilities throughout the site. The Project team conducted one biweekly inspection on *April 3, 2020, in compliance with Covid-19 related “social distancing” guidelines*.

LOCALITY COORDINATION

➤ **Package A**

The Project team coordinated with locality representatives and stakeholders throughout the month at regular coordination meetings. Issues discussed included facilitation of property acquisition, maintenance responsibilities, asset acceptance, and Project interfaces with adjacent projects, including the County-constructed garages. Significant activities that occurred in *April 2020* include the following:

- Continued revisions to the maintenance and conveyance easements/agreements, following the distribution of revised maintenance and conveyance agreements in November 2019 and January 2020. *Updated agreements for Dulles Airport and the Rail Yard were distributed to WMATA for review in April 2020.*
- Continued coordination with Fairfax County. *In April 2020, the focus was coordinating work in the Herndon Station bus loop, and identifying and closing out work list items for Project completion at all station sites to be owned and maintained by Fairfax County.*
- Continued coordination with Loudoun County, with a focus on *identifying work list items for Project closeout.*

➤ Package B

There is no locality coordination for Package B at this time.

ARCHAEOLOGICAL INVESTIGATIONS

➤ Package A

The Virginia Department of Historic Resources (VDHR) as the SHPO approved the final Archaeological Resources Treatment Plan dated January 2013 for the eligible site 44LD1596 located near the yard lead tracks on Dulles Airport property. In the event that an unidentified archaeological resource is discovered during ground disturbing activities and in accordance with its adopted field procedures, CRC will stop work immediately and notify the Project team, which will then inform FTA, SHPO, and other consulting parties in accordance with the stipulations on unanticipated discoveries in accordance with Section V of the executed Memorandum of Agreement (MOA) with SHPO, dated October 5, 2012.

For the Historic Interpretative Exhibit proposed for installation at the Dulles International Airport and the Dulles Metrorail Station, the Project team has continued to advance concept development plans for the Exhibit, preliminary costs, and an implementation schedule. The Project team completed developing the exhibit concepts including narrative text and imagery. The concepts were reviewed by WMATA. All comments have been addressed, and the package was submitted for concurrence to FTA and SHPO. Neither FTA nor SHPO had additional comments. The Project team is now developing the scope of work, specifications, and requirements to be included in the planned Package K task order for final design, fabrication and installation.

➤ Package B

The limits of disturbance for Package B are outside the bounds of the identified eligible archaeological resource on site 44LD1596 located near the yard lead tracks on Dulles Airport property. In the event that an unidentified archaeological resource is discovered during ground disturbing activities, Hensel Phelps will stop work immediately and notify the Project team who will then inform FTA, SHPO and other consulting parties in accordance with the stipulations on unanticipated discoveries in Section V of the executed MOA with SHPO dated October 5, 2012, and contained in Section 10 of its Environmental Management Plan dated December 29, 2014.

10. DESIGN

OVERALL DESIGN PROGRESS

➤ Package A

During *April 2020*, one design change submittal *remained under review by the Facilities Design Oversight team*. *The team also processed 42 requests for information and 36 supplier document packages*. The Project team responded to *16 non-conformance reports*. *One permit amendment was issued by the Airports Authority's Building Codes Department and the Department of General Services*. All major design packages have been issued for construction and base design scope is complete.

➤ Package B

All design packages for buildings/shops, pre-fabricated buildings; site work, delegated designs, and systems have been accepted and permitted.

In *April 2020*, the design team processed *46* design change and field design change submittals, *43* of which were in the comment resolution phase and *three* are new submittals under initial review. All major design packages have been permitted and design is complete.

➤ Package G

In September 2018, Schlosser began design development and submitted the 90% design on November 1, 2018. Comments were returned in December 2018. The 100% design was submitted on January 17, 2019. Comments were returned to Schlosser, a comment resolution meeting was held on February 27, 2019. The Issued for Permit Package was submitted to the AHJ in March 2019 and the construction permit was issued in May 2019.

➤ Package P

Package P was awarded to HGS, LLC on April 13, 2018. HGS LLC submitted its design to DEQ for VSMP permit in October 2018. DEQ returned comments in November 2018 and HGS incorporated the comments. The design was resubmitted to DEQ and was approved on December 27, 2018. The P1 Permit Package was submitted to the AHJ in April 2019. The construction permit was issued in May 2019. The P-2 Package was submitted to the AHJ in June 2019, and the construction permit was issued in July 2019. The P-3 permit package was submitted to the AHJ and the permit was issued in December 2019. The development of the final P-4 design package for the single optional BMP was completed and *approved by VDEQ. The P-4 drawings were submitted for permit in April 2020.*

DESIGN SCHEDULE

➤ Package A

On February 14, 2014, the Project team received CRC's submittal of the Final Baseline Schedule with a data date of July 8, 2013, showing the original plan for design, construction, integrated testing and commissioning of the contracted scope. The Final Baseline Schedule includes 63 design packages for Package A categorized by utilities, civil, structure, facilities, track, and systems and then by four major construction components to support the construction execution plan. The Revised Baseline Schedule reflects 78 design packages including new design packages due to stormwater changes and the updated permitting scheme.

The Package A design completion milestone in the Revised Baseline Schedule *was* realigned to December 21, 2015, from September 14, 2015, in the *original* Baseline Schedule. The status of Package A "*Complete Design*" milestone as shown in Table 36, represents a forecast completion for all design changes. As most of the design packages were completed and *test and commissioning has taken* over the longest path, design package activities are no longer on the critical path.

➤ Package B

All construction permits were secured by October 2017, excluding VDOT and Loudoun County permits for offsite utilities construction, which were received by May, 2019. The Baseline Schedule showed all permits secured by December 2015 at a summary level.

DESIGN COST

Design cost expenditure is a function of earned value as expressed in physical progress (percent complete). In a lump sum contract, the design cost expenditure will mirror the physical progress. Costs are tracked as part of overall Professional Services under FTA SCC Code 80 (see Tables 17 through 20 for Cost Summary by SCC Code). Approved change orders will adjust both cost and schedule as applicable at such time as they are submitted by the contractor and approved for implementation by the Airports Authority.

➤ **Package A**

The estimate at completion for design scope is \$119,476,853. As of *April 30, 2020*, \$115,073,606 has been paid for work through *February 2020*; see Professional Services in Table 18.

➤ **Package B**

The estimate at completion for design scope is \$29,303,310. As of *April 30, 2020*, \$28,357,866 has been paid for work through *February 2020*; see Professional Services in Table 19.

➤ **Package G**

The estimate at completion for design scope is \$820,000. As of *April 30, 2020*, \$779,000 has been paid for work through *March 2020*. See Professional Services in Table 20.

➤ **Package P**

The estimate at completion for design scope is \$1,908,723. As of *April 30, 2020*, \$1,637,537 has been paid for work through *March 2020*. See Professional Services in Table 21.

SCC 10 GUIDEWAY AND TRACK ELEMENTS

➤ **Package A**

- Elevated Guideway Substructure – All elevated guideway packages have been issued for construction.
- At-Grade Guideway and Track – All Wayside Facilities packages (Traction Power Substation and Tie Breaker Stations) have been issued for construction.

➤ **Package B**

The Package B track elements are included in the design package IPP #2, Part 2.

SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

➤ **Package A**

All station packages and sites have been issued for construction.

➤ **Package B**

The contract is limited to design and construction of the WMATA Rail Yard and Maintenance Facility and does not include stations, stops, terminals, or intermodal elements.

➤ **Package G**

All design packages have been issued for construction.

SCC 30 SUPPORT FACILITIES: YARDS, SHOPS, AND ADMINISTRATION BUILDINGS

➤ Package A

The contract does not include design or construction of yards, shops, or administration buildings.

➤ Package B

- The submission of construction shop drawings, supplier documents, and product data continued in *April 2020*. The Project team processed/reviewed *two* construction submittals and *24* submittals were in comment resolution phase.
- The Project team continued to meet with HP on an as-needed basis to discuss and resolve design changes and construction submittal review comments and open action items that were elevated for resolution.

SCC 40 SITEWORK AND SPECIAL CONDITIONS

➤ Package A

All civil/site work packages have been issued for construction.

➤ Package B

- The early sitework and mobilization is included in IPP#0, which was issued for permit in June 2015.
- The early civil work is included in IPP#1, which was issued for permit in August 2015.
- The final sitework is included in IPP#2 Part 1, which was issued for permit in March 2016.

➤ Package P

- The final P-4 design package was *submitted for permit approval in April 2020*.

SCC 50 SYSTEMS

➤ Package A –Tabletop meetings have been reconvened. The following activities took place in *April 2020*.

- *12* ATC submittals were “Accepted”.
- *Ten* ATC submittals were “Accepted as Noted”.
- *Eight* ATC submittals were “Not Accepted”.
- *Three* communication submittals were “Accepted”.
- *Two* communication *submittals were* “Accepted as Noted”.
- *Three* communication RFIs were answered.
- *One Traction Power submittal was* “Accepted”.
- *Two Traction Power submittals were* “Accepted as Noted”.
- *One Traction Power RFI was answered*.
- Current activities focus on reviewing/approving test procedures and witnessing tests.
- Site Specific Work Plans (SSWPs) were submitted to convert Wiehle Avenue from a terminating station to a through station. Work on the TCR commenced in October 2019.
- Two weekend outages were completed in November 2019 to complete the hardware installation. Work is now centered on getting software documentation completed to allow the installation of new software at the next outage, which is being negotiated with WMATA and is dependent on the

submission of all required N06 software documentation expected in *May 2020*. *The outage to complete the interface at N06 is scheduled from May 26, 2020 through July 31, 2020.*

- Shipment of the replacement surge arrestors began in June 2019. In August 2019, installation was completed in the TPSS and TBS facilities. Work continues on the Root Cause Analysis of the failures. The TPSS in the yard *was* instrumented during the initial train runs to see if arching due to contaminated rail *was* a potential cause. *The initial results of the instrument were inconclusive and further studies continued.*
- The batteries for the UPS have deteriorated in several TPSS and TBS locations. Discharge test are being conducted to determine the viability of the batteries at the affected locations. CRC's response was received in March 2020 and is under evaluation.

➤ **Package B**

- *Three* Traction Power submittals were "Accepted".
- *One* Communication submittal *was* "Not Accepted".
- Activity now centers on witnessing tests.

SCC 60 RIGHT-OF-WAY, LAND, EXISTING IMPROVEMENTS

See Chapter 9: Project Development

SCC 70 VEHICLES

Vehicle procurement is being conducted by WMATA as discussed in Chapter 11: WMATA Interface.

SCC 80 PROFESSIONAL SERVICES

Plan Review and Inspection Services

The Virginia Department of General Services (DGS) is responsible for performing plan review and issuing permits for all Package A facilities west of, and including, the Broad Run Bridge. In addition, DGS performs these services for all wayside facilities with the exception of TPSS#16, which is located within the Dulles Airport Station. As a subcontractor to DGS, the Institute of Building Technology and Safety (IBTS) performs building inspections in accordance with Chapter 17 of the Virginia Uniform Statewide Building Code (VAUSBC).

Under direct contract to the project, IBTS independently performs building structural plan review and site inspection services for Packages A, B, G, and P. Structural plan reviews support the third party plan review requirements of the Airports Authority's Building Codes Manual. Site inspection services consist of monitoring Erosion and Sediment Controls for Packages A, B and P, as well as construction compliance of stormwater management facilities, and reporting to the Virginia Department of Environmental Quality (DEQ). These services will continue through June 2020 and will be expanded to include Package K construction as required.

Structural Consulting and Procurement Support

Dulles Rail Consultants provides consulting services on a task order basis for both Packages A and B. In March 2020, Dulles Rail Consultants was inactive.

Special Inspection Services

Professional Services Industries (PSI) is conducting VAUSBC-required Special Inspections for both Packages A and B. These services consist of both field inspections and materials testing, in addition to documenting all of the inspection and testing work in a sealed Special Inspection Report for each facility/permit. In February 2020, PSI continued inspections, as well as preparation and submittal of the Special Inspection Reports and documents related to Universal Concrete Products panel treatment. PSI's general services will be expanded to include Packages G and K as required.

ART IN TRANSIT

➤ Package A

WMATA has awarded contracts and given the Notice to Proceed for all the Art In Transit (AIT) installations with the exceptions of Reston Town Center and Ashburn Stations. The Airports Authority has coordinated design information and schedules for installation. In August 2019 the final 100% design submittal was submitted to the Project by WMATA (for Dulles Airport Station). CRC has completed preparation work at Dulles Airport, Herndon, Innovation Center and Loudoun Gateway Stations. At Ashburn Station, the selected artist resigned their commission and has withdrawn from further consideration in the Project. WMATA and Loudoun County have concurred with the Airports Authority's recommendation to provide a pigmented sealer in the blackout panel areas in Ashburn Station, which was applied in September 2019. In November 2019, the installation of pavers at Innovation Center Station was completed, *except for some localized trim work at the columns*. In December 2019 the tiles were set in the Herndon Station pedestrian bridges and electrical work continued in January 2020. In March 2020, electrical work was completed. The contractor continued setting pavers at the Loudoun Gateway Station *in April 2020*. WMATA is pursuing procurement of art installation for Reston Town Center and Ashburn Stations. In January 2020, design packages were distributed to candidate artists for final selection. At the Dulles Airport Station, the artist completed fabrication of the artwork. *Electrical work began in April 2020 and installation of the metal panels is scheduled for May 2020.*

➤ Package B

Art in Transit does not apply to Package B.

LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED)

➤ Package A

Following a 2014 assessment of the Project's ability to obtain LEED certification, it was determined that no formal certification would be pursued. Provisions already in the contract which are considered to be consistent with responsible and sustainable design practices will be followed.

➤ Package B

The contract and statement of work for Package B require that three buildings be certified LEED Silver or higher. Hensel Phelps' LEED Management Plan outlines their approach to achieving LEED Silver Certification for three of the buildings on the rail yard. Hensel Phelps began to submit monthly construction materials reports on their regional and recycled materials along with construction waste recycling in June 2015. Hensel Phelps is anticipated to submit their Design LEED Credits for review in *May 2020*.

11. WMATA INTERFACE

WMATA 7000-SERIES RAILCAR PROCUREMENT

The 7000 series railcar contract was awarded to Kawasaki Rail Car Inc. on July 26, 2010, for 528 railcars. The last option of the 7000 series contract (220 railcars) was exercised during the first quarter of FY2016. All 748 railcars have been ordered, as of February 29, 2016. The contract provides for the design, manufacture, test and delivery of 7000 series heavy rail rapid transit cars:

- Base contract for 64 railcars for Dulles Phase 1
- Option 1 - 64 railcars for Dulles Phase 2
- Option 2 - 130 railcars for growth cars that support 75% 8-car trains
- Option 3 - 100 railcars for replacement of 4000 series railcars
- Option 4 - 300 railcars for replacement of the 1000 series railcars
- Option 5 - 90 railcars supporting ridership growth for 100% 8-car trains

On August 15, 2012, the Airports Authority authorized WMATA to amend their contract with Kawasaki to exercise the option for an additional sixty-four 7000 Series railcars for Phase 2. This is identified as Option 1 in the Kawasaki contract but was not the first option exercised. WMATA's letter of August 30, 2012, confirmed the executed amendment to the Kawasaki Contract. The Airports Authority budget including contingency, in year of expenditure dollars, for the 64 railcars for Phase 2 is \$213.383 million.

WMATA has exercised Option 4 of the contract with Kawasaki for 300 railcars to replace the older 1000-Series railcars. Following completion of Option 4, Kawasaki will then proceed with the aforementioned Option 1 for the second group of 64 railcars as part of Phase 2.

Following meetings between WMATA and TOC regarding testing of the railcars, WMATA released the following statement:

"Metro and the Tri-State Oversight Committee (TOC) have reached an agreement regarding the safety certification process for Metro's new fleet of 7000-series railcars. The agreement will allow testing to proceed on its current timeline with certain modifications to reports and documentation to be responsive to TOC requests."

WMATA completed its internal testing and safety certification process for the first eight railcars for Phase 1 in February 2015. WMATA placed the first eight of these new railcars into revenue service on April 14, 2015. The 64 railcars for Phase 2 were placed in service following the completion of internal testing and safety certification process.

WMATA BUDGET/COST

As reflected in Table 22: Monthly Cost Report, \$206.5 million (74%) of the WMATA budgeted costs of \$280.8 million have been paid through *April 2020*. The First Amendment to the Phase 2 Cooperative Agreement dated August 7, 2013 between WMATA and MWAA was made on October 31, 2018, to resolve certain budget disputes for Rail Car Budget Engineering Contract (LTK) and Rail Car Budget Contract Escalation to reduce the total Rail Car Budget by \$24,565,599. This saving is reflected in the current budget and estimate at completion in Table 22 of this report.

In *April 2020*, the Project processed and paid \$7,058,253 for WMATA's *other expenses* for January and February 2020.

DESIGN REVIEW BY WMATA

➤ Package A

WMATA is participating in design review of all design packages submitted by CRC, participating in comment review meetings and contributing to submittal reviews cited in Chapter 10: Design.

➤ Package B

WMATA participated in the design review of all design packages submitted by Hensel Phelps, participating in comment review meetings and contributing to submittal reviews cited in Chapter 10: Design.

➤ Package G

WMATA participated in the design review of all design packages submitted by Schlosser, including comment review meetings and contributing to submittal reviews cited in Chapter 10: Design.

➤ Package P

WMATA participated in design review of all relevant design packages submitted by HGS, including comment review meetings and contributing to submittal reviews cited in Chapter 10: Design.

12. CONSTRUCTION

OVERALL CONSTRUCTION PROGRESS

➤ Package A

The following activities took place in *April 2020*.

Civil

- Contractor performed touchup paving and roadway striping where necessary.

34.5kV Traction Power Feeders

- In *April 2020*, Dominion Energy representatives were on call and available to open and close the Vista switches as requested by CRC for ongoing testing of the energized system downstream from the 34.5 kV feeders.

Stations

- Reston Town Center Station, Herndon Station, Innovation Station, Dulles Station, Loudoun Gateway Station, Ashburn Station - Elevator and escalator internal testing continued in the station and in the associated pavilions.
- Art in Transit work was *completed* at the pavilion at Loudoun Gateway Station.
- Fire Alarm testing and verification at all stations continued through *April 2020*.

Track

- Crews continued to perform final alignment of track and switches.

Systems

- In *April 2020*, electricians made connections and equipment available for code inspections to record that everything is installed per the approved design drawings.
- Package B
In *April 2020*, HP continued with punch out for all buildings. HP also continued work on the installation, synchronization, and pre-functional testing of the car hoists in the SIB. Dynamic testing *continued in April 2020. Pre-functional testing of the train wash began.*
- Package G
In *April 2020*, Schlosser *continued the full penetration welds* of the Architecturally Exposed Structural Steel (AESS) column and purlin connections.
- Package P
In *April 2020*, HGS continued with the construction of 13 BMPs, and began construction on one additional BMP. Four BMPs are completed except for the access roadways and final planting *which will begin in May 2020.*

CONSTRUCTION SCHEDULE

- Package A
According to the Revised Baseline Schedule (RBS) of February 2015, the Construction Phase started on June 16, 2014. The RBS reflected the contract Scheduled Substantial Completion Date of August 7, 2019. The Package A contractor's *April 2020* schedule update reflects the forecast Scheduled Substantial Completion Date (SSCD) of *May 11, 2021*.
Construction of the at-grade guideway was substantially completed on July 9, 2018, and the elevated guideway was substantially complete on November 13, 2018. According to CRC's *April 2020* schedule update, systems installation is expected to be completed in January 2021 and station buildout is expected to be substantially complete in *June 2020*. Complete systems integration with Phase 1 is dependent on access to the N06 Wiehle Avenue Station TCR, and the ability to integrate CRC's Automatic Train Control (ATC) software into WMATA's ATC network. *WMATA has announced a shutdown of passenger service on Phase 1 of the Silver Line during the summer of 2020, which could improve the systems integration as well as the testing and commissioning schedule.* See Chapter 7: Project Schedule, for more information.

In comparison with the Revised Baseline Schedule, CRC's *April 2020* monthly schedule update reflects a slippage of 626 calendar days to the finish milestone for complete station build-out (initial forecast was November 21, 2018), and a slippage of 802 calendar days to the finish milestone for the systems' installation (initial forecast was September 21, 2018).

- Package B
According to the *April 2020* monthly schedule update, formal commissioning started in July 2018. Construction of tracks started on January 23, 2017 and was completed in August 2019. HP has been

performing remedial track work and the majority of this work is complete. The projected substantial completion is currently driven by *replacement of surge arresters at the SIB, Phase 2* dynamic testing, followed by the SPD and substantial completion.

Efforts to mitigate delays are ongoing between HP and the Project team. The Airports Authority issued a directive letter removing the requirement for certain aspects of the head-end programming to be completed prior to the Systems Performance Demonstration, which removed these activities from the longest path. The Project team will continue to expedite reviews to mitigate the delays and has issued a directive letter indicating that the Yard may be tested in phases so that completion of the buildings will not delay testing of the trackwork. The construction longest paths are discussed in Chapter 7: Project Schedule.

CONSTRUCTION COSTS

Construction costs, including those for mobilization, procurement, and testing and commissioning, reside in FTA SCC Codes from 10 through 70. In Tables 17 through 20 (Cost Summary by SCC Code), these costs can be determined by subtracting Professional Services (SCC Code 80) from the total cost.

➤ Package A

The estimate at completion for CRC construction cost is \$1,314,200,975. As of April 30, 2020, \$1,256,228,417 has been paid for construction work done through February 2020.

➤ Package B

The estimate at completion for Hensel Phelps construction cost is \$273,295,892. As of April 30, 2020, \$250,314,872 has been paid for construction work done through February 2020.

➤ Package G

The estimate at completion for Schlosser construction cost is \$6,155,812. As of April 30, 2020, \$2,802,111 has been paid for construction related work done through March 2020.

➤ Package P

The estimate at completion for HGS construction cost is \$23,190,458. As of April 30, 2020, \$11,874,273 has been paid for construction related work done through March 2020.

SCC 10 GUIDEWAY AND TRACK ELEMENTS

➤ Package A

In April 2020, cleanup continued on the east, aerial and west segments of the Project as testing continued from Reston Town Center Station through Dulles Yard Leads to Ashburn Station.

➤ Package B

Package B track elements are discussed in SCC 30 Support Facilities: Yards, Shops and Administration Buildings.

SCC 20 STATIONS, STOPS, TERMINALS, INTERMODAL

- Package A
In *April 2020*, work continued at all stations, with the testing of the fare collection equipment interface with the fire alarm system and station clean-up.
- Package B
These elements do not pertain to Package B.
- Package G
In *April 2020*, Schlosser *continued the full penetration welds* of the column and purlin *connections*.

SCC 30 SUPPORT FACILITIES: YARDS, SHOPS, ADMINISTRATION BUILDINGS

- Package A
These elements do not pertain to Package A.
- Package B
In *April 2020*, punch list work continued throughout the entire site. Work continued on the car hoists and truck hoists in the SIB.

SCC 40 SITEWORK AND SPECIAL CONDITIONS

- Package A
Traffic diversions and lane shifts were set and work areas were made safe along the DIAAH, DTR, and Greenway, for crews accessing the stations or overhead pedestrian bridges.
- Package B
These elements are discussed in SCC 30 Support Facilities: Yards, Shops and Administration Buildings.
- Package P
Package P includes a total of *14* BMPs and one optional BMP. Construction of one additional BMP began in *April 2020*.

SCC 50 SYSTEMS

- Package A
Verification of system cabling and systems equipment and testing of the equipment along the at-grade and aerial guideway continued in *April 2020*.
- Package B
These elements are discussed in SCC 30 Support Facilities: Yards, Shops and Administration Buildings.

SCC 60 RIGHT-OF-WAY, LAND, EXISTING IMPROVEMENTS

These elements are discussed in Chapter 9: Project Development.

SCC 70 VEHICLES

Vehicles are discussed in Chapter 11: WMATA Interface.

SCC 80 PROFESSIONAL SERVICES

There were no professional construction service elements for Package A or B employed in March 2020.

13. TESTING AND COMMISSIONING

➤ Package A

Configuration of the Supervisory Control and Data Acquisition (SCADA) System in the traction power substations and tie breaker stations continued in *April 2020*. The configuration of the head-end by WMATA's subcontractor Collins Aerospace *continued in April 2020; final configuration awaits acceptance of the Point Assignment Chart*. SCADA prototype testing resumed in March 2020, and SCADA submittal reviews will continue in *May 2020*. In February 2020, CRC made formal submittals of the passenger station and contact rail heat tape Point Assignment Chart (PACs); *WMATA comments were returned to CRC and being incorporated*. Testing of the Automated Energy Management System (AEMS) Points in the Wayside facilities is scheduled to begin in *May 2020*.

Testing of station fire alarm systems continued in *April 2020*. *Wayside facility testing was completed in April 2020*. The Mobile Radio System (MRS) acceptance testing with Fairfax County was completed in March 2020.

WMATA *cancellation of* all planned weekend outages, for further testing and tie-in of Phase 2 at Wiehle Avenue *remained in effect in April 2020*. In March 2020, CRC provided software validation documentation to support validation and verification testing of the proposed changes in the absence of simulation testing. The documents *were reviewed by WMATA and CRC is responding to the provided comments*. The Airports Authority is working with WMATA and CRC to determine the best way to meet WMATA requirements and resume integration and testing in *May 2020*.

Dynamic Testing resumed on March 10, 2020, in Track Area 1 (N96/N10/N97) as CRC performed (wayside test procedures) WTPs 2.17 and 2.20 utilizing 7000 Series Railcars. Trains were also moved into the Yard to support Dynamic Testing there. WMATA has divided its operating crews into two teams as part of their coronavirus protocol. The Airports Authority continues to coordinate testing schedules using these crews between Packages A and B. *Dynamic testing on Package A was limited due to the compliance with Covid-19 related "social distancing" guidelines but is expected to resume in May 2020*.

ATC static testing in *April 2020 was limited to what could be completed remotely*.

The Project team continued weekly meetings with WMATA to co-ordinate individual subsystem testing schedules, planning, and the witnessing of tests for traction power, ATC, communications, and passenger station systems and equipment. There are also bi-weekly meetings on SCADA being held to coordinate integration testing with the OCC.

➤ **Package B**

Contact Rail Heater (CRH) Tape FPT was delayed from *April 2020* while final approval of the Test Procedure is sought by HP. Yard Test Procedure (YTP) 32 and ATC integration testing with Package A, and the functional test of the interface is expected to occur in *May 2020*.

Dynamic testing commenced in March 2020 and HP commenced rail polishing in the Yard. The grade crossing was tested successfully in March 2020. The testing of rail lubricators, the TWF, and the MWB exhaust system *was completed in April 2020. There are outstanding issues with both the exhaust fan system and the TWF which need to be resolved prior to tests being considered successful.*

SCADA testing of the AIM points was completed in March 2020, and *was tested again successfully in April 2020. The contractor had some communications issues with the server failover test which need to be resolved. AEMS testing is targeted to commence in May 2020.*

There are numerous issues with the YTC test reports in the Yard which need to be resolved prior to moving to System Performance Demonstration. CCTV and Access Control final performance testing will be completed in May 2020.

The Project team continued weekly testing and commissioning meetings with HP and WMATA to coordinate individual subsystem testing schedules, planning and witnessing of tests for traction power, yard train control, communications, and facilities systems and equipment.

14. METRORAIL PARKING GARAGES

The Project's five Metrorail parking garages, two in Fairfax County and three in Loudoun County, will be constructed with at least the same number of park-and-ride spaces for Metrorail users as is called for in the final Phase 2 PE plans, consistent with the Record of Decision and the 2012 FONSI governing the Project and also consistent with the 100% PE plans. The total increase of 8,915 new Metrorail park-and-ride spaces will be distributed as shown in the following table and are to be available concurrently with the opening of the Project for revenue service.

Table 42 - Distribution of Park-and-Ride Spaces for Metrorail Users

Station	Existing Spaces	Number of New Metrorail Spaces	Total
Herndon	1,622	2,006	3,571
Innovation Center	0	2,070	2,070
Loudoun Gateway (Route 606)	0	1,965	1,965
Ashburn (Route 772) North	0	1,434	1,434
Ashburn (Route 772) South	0	1,555	1,555
TOTAL		9,030	10,595

GARAGES IN FAIRFAX COUNTY

One parking garage for Metrorail riders will be built at Herndon Station and one at Innovation Center Station in Fairfax County. Fairfax County's Department of Public Works and Environmental Services is the lead county agency for the design and construction of both garages. Efforts continue to build these as county projects from funding sources outside of the Project funding agreement. On November 26, 2014, FTA notified Fairfax County that the County's Title VI Program meets the requirements set out in the FTA's Title VI Circular, 4702.1B. Fairfax County submitted the update of the Title VI Program in Q3 2017.

➤ Herndon Station Parking Garage

The Herndon Station parking garage is planned to be designed, constructed, owned, maintained, and operated by Fairfax County. It is a Design-Bid-Build procurement with oversight provided by the County. With the Sprint land acquisition completed in August 2015, Fairfax County has acquired all the land required for the garage project. With design complete and site permit approvals received, contract award and notice to proceed occurred in October 2016. A groundbreaking for the project was held November 30, 2016. Site clearing for the garage structure started in December 2016. The Herndon Station parking garage was completed and opened to the public for parking in April 2019. The major milestones are shown in Table 43.

Table 43 - Herndon Station Garage Schedule Milestones

Milestone	Date
Architectural and Engineering Firm Selection	August 2013 (A)
Concept Design Start	September 2013 (A)
Concept Design Completion	February 2015 (A)
Schematic Design Start	January 2014 (A)
Schematic Design Completion	February 2015 (A)
Land Use Entitlement Process (2232) Approval	June 2014 (A)
Design Development Start	September 2014 (A)
Design Development Complete	April 2015 (A)
Value Engineering Start	March 2015 (A)
Value Engineering Complete	May 2015 (A)
Construction Documents Start	July 2015 (A)
Permitting Start	September 2015 (A)
Construction Procurement Start	September 2015 (A)
Construction Start	December 2016 (A)
Construction Completion	April 2019 (A)

➤ Innovation Center Station Parking Garage

The Innovation Center Station parking garage is designed, constructed, owned, maintained, and operated by Fairfax County. It is a Design-Bid-Build procurement with oversight provided by the County. The Fairfax County Board of Supervisors approved the land use application on July 29, 2014. Schematic design was completed in February 2015 and design development was completed in April

2015. Garage construction was advertised for bid to prequalified contractors in December 2016. Manhattan Construction Company received the Notice to Proceed in April 2017.

On July 30, 2013, the Fairfax County Board of Supervisors approved a Real Estate Exchange Agreement with Nugget Joint Venture LLC and Rocks Engineering Company (RECO). The agreement provides a path for a joint integrated development plan through an exchange/acquisition of property and a joint rezoning for the parking garage and adjacent private development.

On June 15, 2015, Fairfax County and Nuggett Joint Venture LLC/Rocks Engineering held a groundbreaking ceremony on the joint infrastructure. The joint infrastructure site issued a notice to proceed on November 4, 2015, and work began in November 2015. The exchange of property between Fairfax County and Nugget Joint Venture LLC/Rocks Engineering was completed in March 2016. Construction on the garage began in April 2017.

In August 2018, there was settlement of three caissons in the garage structure. Fairfax County engaged an independent third party technical expert, FTG to work directly for the County's interest in reviewing all aspects of the investigative analysis and remedial work. A redundant foundation system was installed to address the settlement issues. In February 2019, the approval for lifting the Stop Work Order was issued and construction resumed in March 2019.

The construction of the garage is 98% complete. Completion is anticipated in April 2020. The garage is still scheduled for completion by the Revenue Operations date. The major milestones are shown in Table 44. Dates for future milestones are tentative.

Table 44 - Innovation Center Station Garage Schedule Milestones

Milestone	Date
Architectural and Engineering Firm Selection	August 2013 (A)
Concept Design Start	September 2013 (A)
Concept Design Completion	February 2015 (A)
Schematic Design Start	January 2014 (A)
Schematic Design Completion	February 2015 (A)
Land Use Entitlement Process (2232) Approval	June 2014 (A)
Design Development Start	September 2014 (A)
Design Development Complete	April 2015 (A)
Value Engineering Start	March 2015 (A)
Value Engineering Complete	May 2015 (A)
Construction Documents Start	July 2015 (A)
Permitting Start	June 2016 (A)
Construction Procurement Start	October 2016 (A)
Construction Start	April 2017 (A)
Construction Completion	April 2020

GARAGES IN LOUDOUN COUNTY

One parking garage for Metrorail riders is built at the Loudoun Gateway (formerly Route 606) Station and two are being built at the Ashburn (formerly Route 772) Station in Loudoun County. On January 15, 2014, the Loudoun County Board of Supervisors voted to remove the three garages planned to serve Ashburn and Loudoun Gateway Stations from the Project budget and to fund and construct the three garages separately, assuming receipt of TIFIA funds.

On January 15, 2014, the Board adopted a Title VI plan for its commuter bus operations to meet the eligibility requirements for federal loans and grants. Loudoun County received FTA concurrence on the Title VI Plan on January 23, 2014, and since June 2014, Loudoun County has continued to advance the plan's implementation actions contained in the Title VI plan. Implementation of all commitments contained in the Title VI Plan was achieved in fall 2014.

➤ Ashburn North Garage (COMSTOCK)

The Ashburn North garage is constructed on a development parcel owned by Comstock LLP, the entity that will also operate the garage. The site was conveyed to Loudoun County in January 2016. This site provides improved access and egress to the Ashburn Station compared to the site identified during PE, due to its location adjacent to Metro Center Drive – one of two major entrance roads leading to the Ashburn Station. In January 2015, Loudoun County, in coordination with the Project team, prepared a justification of this new garage site for submittal to FTA. FTA approved the garage location on August 10, 2015.

On December 9, 2015 the Loudoun County Board of Supervisors approved and fully executed the Comprehensive Agreement with Comstock for the construction of the Ashburn North Garage. The Board of Supervisors also passed all necessary zoning and special exception actions to permit the construction of the Ashburn North garage.

The Ashburn North Garage was completed in January 2018. In April 2018, certificate of occupancy was granted to Comstock. The Ashburn North Garage is open under the "Temporary Use" clause in the Master Agreement. The milestones for the Ashburn North Garage are shown in Table 45.

Table 45 - Ashburn North Garage Milestones

MILESTONE	DATE
Garage Design	November 2015 (A)
Zoning Approvals	December 2015 (A)
Site Planning	September 2016 (A)
Construction Drawings	August 2016 (A)
Obtain Building Permits	December 2016 (A)
General Contractor Selection/NTP	December 2016 (A)
Begin Garage Construction	January 2017 (A)
Garage Construction Complete	January 2018 (A)
Operating & Maintenance Plan Development	January 2018 (A)
Open Metrorail Parking Operations	Revenue Service Date

➤ **Ashburn South and Loudoun Gateway Garages**

At the May 19, 2016, meeting of the Loudoun County Board of Supervisors, it was agreed that the restrictions and financial requirements Nexus wanted from Loudoun County were not acceptable. As a result, the Board of Supervisors passed a motion instructing staff to terminate negotiations with Nexus in favor of the County pursuing the self-perform option to ensure compliance with the TIFIA contract and the timeframe for the completion of the Metrorail station garages. The County's Capital Improvement Program includes \$130 million reserved over the next three years for construction of the three garages. The County has also set aside debt capacity to finance up to that amount over the next three years, and anticipates paying it off no later than 2039.

The Loudoun Gateway and Ashburn South garages are designed to the 30%-level by a joint consultant team of Grimm & Parker and Timmons Group.

Loudoun Gateway Garage

Substantial completion is expected in April 2020 and final completion is expected in May 2020, pending completion of punchlist items. The contractor is addressing punchlist items.

Ashburn South Garage

The certificate of substantial completion was issued in December 2019. Final completion was issued in March 2020. Loudoun County has taken possession of the Ashburn South Garage. The garage will remain closed to public use until Metrorail Silver Line Phase 2 revenue service begins.

The milestones for Loudoun Gateway and the Ashburn South Garages are shown in Table 46.

Table 46 – Ashburn South and Loudoun Gateway Garage Milestones

MILESTONES	Loudoun Gateway DATE	Ashburn South DATE
Notice to Proceed	June 1, 2017(A)	June 1, 2017 (A)
Design	February 2018(A)	February 2018 (A)
Foundation Construction Start	May 2018 (A)	May 2018
Precast Structure	November 2018 (A)	November 2018 (A)
Structure Finishes	March 2019 (A)	May 2019 (A)
Substantial Completion	April 2020	December 2019 (A)
Certificate of Substantial Completion	May 2020	December 2019 (A)
Final Completion	May 2020	March 2020 (A)

All three Loudoun Metrorail garages will be completed within the deadline for garage delivery contained in Loudoun's TIFIA contract.

15. COMMUNITY OUTREACH

In *April 2020*, the Project team continued to engage stakeholders as activities continued throughout the Project alignment along the DTR, the DIAAH, Sunset Hills Road, Sunrise Valley Drive, Moran Road, Lockridge Road, and the Dulles Greenway, as well as at the Dulles International Airport. Project crews continued several construction-related activities requiring coordination and communication with local governments, elected officials, businesses, residents, media outlets, and commuters in the area.

With most of the pavilion, station and track construction complete along the Project alignment, resolutions for quality list items identified by the WMATA's Office of Inspector General (OIG) continued in *April 2020*. Testing and troubleshooting continued in February 2020, where possible, including having the first test trains onsite at the Rail Yard and Maintenance Facility at Dulles Airport. The Project team continues to work closely with Project partners Fairfax and Loudoun counties. The Package P team continued work on stormwater ponds, while work continued on Package G screen wall at the Dulles Airport Station. The Project team issued lane closure alerts regarding traffic impacts from these activities. A total of *nine* alerts, including *three* press releases, were distributed in *April 2020*. Communities in Fairfax and Loudoun Counties, the Town of Herndon, as well as at Dulles Airport, were kept apprised of the Project via electronic and personal communication. The Project team issued weekly alerts as well as press releases about upcoming and ongoing activities as well as construction alerts to Dulles Airport businesses. The Project team participated in and/or conducted several outreach activities including the following:

- Responded to media inquiries addressing issues in the Office of Inspector General's (OIG) Report directly issued to WMATA.
- Released the *February 2020* Monthly Progress Report to media outlets including The Washington Post, WTOP, Loudoun Times-Mirror and NBC 4. Responded to follow-up phone calls and interviews with media agencies.
- Prepared documents for the Airports Authority Board of Directors
- Monitored state and local government actions in response to the Covid-19 pandemic.
- Coordinated draft and distribution of articles and photos to *Reston Now*, *Loudoun Times-Mirror*, *Tysons Reporter*, *The Washington Post*, *Sun Gazette*, *DATA Newsletter*, *Viva Tysons Magazine*, and *Around Reston Magazine*.
- *Began updates to the Project website.*
- Distributed March 2020 edition of Metrorail On Track newsletter via website, internal email and Twitter (included information discussing the impact of Covid-19 pandemic and how to contact the Project).
- Participated on Metro Monday conference calls and prepared for impact of Covid-19 pandemic on these events with Dulles Regional Chamber of Commerce.
- Attended the Broadlands Rotary Club conference call *and DATA Metro Monday conference call.*
- Kept media informed about the Project and communicated with reporters about day-to-day activities and new construction photos, including The Washington Post, NBC 4, WTOP, CBS

MONTHLY PROGRESS REPORT for April 2020

Channel 9, ABC News, Tysons Reporter, Loudoun Now, Around Reston Magazine, Loudoun Times-Mirror and Engineering News-Record.

- All planned festivals, presentations and tours have been postponed until further notice as a precautionary response to the Covid-19 outbreak.

The Project team maintains contact with members of the media on a regular basis to provide Project updates and respond to inquiries. A total of 65 outreach activities were recorded in *April 2020*, including 11 business outreach endeavors, seven community outreach endeavors, and seven instances of coordination with local government entities and elected officials.